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Eagle Zinc Company
ILD 980606941
SF/HRS

CERCLA

Expanded Site Inspection



Illinois Environmental
Protection Agency

CERCLA Expanded Site Inspection Report
for

Eagle Zinc Company

Ild. 980606941

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1. INTRODUCTION

Illinois Environmental Protection Agency's CERCLA Site Assessment Program was tasked by the U.S. Environmental Protection Agency (USEPA) to conduct an Expanded Site Inspection (ESI) of the Eagle Zinc Company property. The facility was located at Road 1200 East Smith and Illinois State Route 16 east in Hillsboro, Illinois.

The facility was initially placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLA) on June 1, 1981 as a discovery action initiated during Sherwin Williams ownership. Sherwin Williams filed an Environmental Protection Agency (EPA) form 8900-1 Notification of Hazardous Waste Site in accordance with Section 103c of CERCLA, which indicated that waste slag had been deposited on company property. The initial CERCLA investigation occurred at this facility in 1984 when a Preliminary investigation of the facility was conducted by the Illinois EPA. The CERCLA Preliminary Assessment report was submitted to Region V offices of U.S. EPA. A workplan for the CERCLA Screening Site Inspection was prepared by Ecology and Environment, and submitted to USEPA Region V in February 1986. The facility was evaluated under HRS I rule which did not assess the surface water or soil exposure pathways. Therefore the facility was reevaluated in 1993 under the present CERCLA Hazard Ranking System. The field activity portion of the CERCLA Expanded Site Inspection for this property was conducted on October 26 and 27, 1993. The field activities portion of this ESI

included interviews with Eagle Zinc Company plant manager, residents familiar with the facility, site reconnaissance inspection and the collection of 28 environmental samples.

The purpose of the ESI have been stated by USEPA in a directive outlining CERCLA site assessment program strategies. The directive states:

The objective of the Expanded Site Inspection (ESI) is to provide documentation for preparing the Hazard Ranking System (HRS) package to support National Priority List (NPL) rulemaking. Remaining HRS information requirements are addressed and site hypotheses not completely supported during previous investigations are evaluated. Expanded SI sampling is designed to satisfy HRS data requirements by documenting observed releases, observed contamination, and levels of actual contamination at targets. In addition, investigations collect remaining non-sampling information. Sampling during the ESI includes background and quality assurance\quality control samples to fully document releases and attribute them to the site. Following the ESI, information collected and analytical results will be assembled into a report. USEPA site assessment managers review the ESI report and assign the site a priority for HRS package preparation and proposal to the NPL.

The Region V offices of the U.S. EPA have also requested that the Illinois Environmental Protection Agency identify sites during the ESI that may require removal action to remediate an immediate human health and/or environmental threat.

A U.S. Environmental Protection Agency Removal Integrated Site Evaluation form pertaining to site specific operations and waste characteristics was completed and forwarded to U.S. Environmental Protection Agency Regional Offices.

On September 13, 1994, information concerning Eagle Zinc Company was discussed with U.S. Environmental Protection Agency, Chief of Emergency Response for the State of Illinois, Mr. Donald Bruce. Prior to the discussion, Mr. Bruce reviewed available

information concerning the facility from the 1993 workplan for Eagle Zinc Company. Current analytical information obtained from the 1993 sampling event and current facility conditions were also discussed. It was the opinion of Mr. Bruce that the site did not require a time critical or non time critical removal action.

Based on initial findings from the Expanded Site Inspection, and a conversation with Mr. Bruce, it was determined that the property does not pose an immediate threat to human health or the environment to warrant a response action. Although no immediate removal threat is presently warranted, further investigation is necessary to determine environmental effects caused by the facility. Lead levels found on the property were of concern to Mr. Bruce. If additional information documents the presence of a threat to human health or the environment, this will be forwarded to U.S. EPA and a re-evaluation of a CERCLA removal action will occur at that time.

2.SITE BACKGROUND

2.1 INTRODUCTION

Information in this section includes documentation collected over the course of the formal CERCLA Expanded Site Inspection and previous Illinois Environmental Protection Agency activities involving this facility. Specific activities included an internal file search, a series of site representative interviews, field reconnaissance inspections, and a sampling visit of the facility.

2.2 SITE DESCRIPTION

The parcel of property under investigation is located outside municipal boundaries, on the northeast corner of Hillsboro, Illinois in Montgomery County. The plant property consisted of approximately 132 acres. Eagle Zinc Company's plant manager, Mr. Tom Youngless, estimated that approximately 20 percent (about 26 acres) of the total plant property was covered with buildings. Main buildings on the property included an office which also had a plant laboratory, equipment storage, furnace house and baghouse where the zinc product was recovered.

The area west of Eagle Zinc production buildings was used for deposition of residue materials generated from smelting operations. Black residue piles covered the majority of the southwest corner of this property. The height of the residue piles ranged from a few feet to approximately 40 feet. Residue materials have also been used to surface roads throughout the facility.

Two facility ponds, each approximately one half acre in size, were observed during the site reconnaissance on October 1, 1993. Mr. Tom Youngless stated the pond on the southeast corner of the property did not discharge water from the property. There were no visual indications during the site reconnaissance or the field inspection that this pond received surface runoff from residue materials located on the facility. The second pond noted, was located on the southwest corner of the property which was constructed by damming up the surface water drainage route with furnace residue. The height of the dam measured 41 feet above the

native topography. Surface water drained from Eagle Zinc Company to the west into a low area with cattails and other wetland vegetation. The drainage way then continued southwest until it reached the pond. Surface water was observed during the site reconnaissance to discharge through a void in the dam and travel west of the property.

Access to the zinc company property was not limited by the presence of a fence or other structures. A limited number of motorcycle tracks were observed on the residue piles during the field inspection. This would suggest that the facility had been occasionally used for recreational purposes. The area west and south of the property was primarily used for residential purposes. Land use east of Eagle Zinc was both residential and industrial. North of the zinc company was a golf course and private residents.

The nearest residence in relation to the facility, was located adjacent to the southwest corner of the zinc company property, approximately 200 feet from the residue constructed dam. Eagle Zinc Company was situated in the southeast 1\4 of Section 1, Township 8 North, Range 4 West of the Third Principal Meridian, Montgomery County, Illinois (Appendix A).

2.3 SITE HISTORY

Originally the zinc processing facility began operations around 1917 under the name Eagle Pitcher. The facility was operated by Eagle Pitcher until 1979. In 1979-1980 Sherwin Williams acquired the property and operated until 1984. In 1984 the facility changed

hands again and currently remains in the ownership of Eagle Zinc Company, a division of T.L. Diamond Company located in New York City.

The smelting process used by Eagle Pitcher Zinc Company is currently unknown. However, Sherwin Williams used a process known as the American process to produce zinc oxide and Eagle Zinc Company currently uses this process. The pyrometallurgical process required a mixture of anthracite coal as the reducing agent and crude zinc ore. The mixture of zinc feedstock and coal was heated, in a rotary furnace, to a point which the zinc changed from a solid to a vapor. Oxygen was mixed with the heated zinc vapor through a series of cooling pipes to result in zinc oxide. The zinc oxide was a white powder which was filtered at the next stage of the process, in the baghouse after the mixture left the cooling tubes.

Refined zinc oxide is used mainly in the rubber tire industry and paint production. Illinois EPA division files contain information regarding the use of lead ore being used during the ownership of Eagle Pitcher. Lead oxide was recovered from the raw ore and used in the production of lead based paints. Production of lead oxide was stopped after lead was banned in paints. Documentation pertaining to the time period when lead ore was processed is currently unavailable.

A railroad spur was located on the southeast corner of Eagle Zinc Company property. Coal is currently being shipped to the plant solely by railcar, while zinc ore is shipped to the plant by railcar and also by truck. Once the materials are delivered to the

facility, they are stockpiled and blended as needed. After the material was removed from the rotary furnace, Mr. Youngless referred to it as furnace residue. Mr. Youngless commented that the residue contains zinc and copper which can be removed by a sister plant to Eagle Zinc located in the eastern part of the United States. The carbon in the residue can also be recovered and reused in plant operations, according to Mr. Youngless this process has not occurred for 1.5 to 2 years. Due to low market values of zinc, the plant manager has made no efforts to reduce the amount of residue stockpiled at the facility. Because the residue has some economic value, Mr. Youngless claims the residue should not be classified as waste, and will eventually be used. A letter dated March 11, 1991 was sent to IEPA and stated that Eagle Zinc Company did not operate a landfill on the property.

The Eagle Zinc facility was first inspected by IEPA in the early 1970's. Several problems were encountered during these inspections. Some of the violations involved; municipal refuse, scrap metal, and drums dumped in the facility pond. There were reports that the company allowed employees to dump household waste along a road which extended west of the Eagle Zinc plant buildings toward one of the two retention ponds.

In July 1981, surface water samples were collected by the Illinois EPA from surface runoff areas around the facility. The agencies division Water Pollution Control began to investigate the facility based on these initial analytical results. Additional samples were collected on November 19, 1981 and March 23, 1982.

Analysis of these samples revealed elevated concentrations of zinc, cadmium, iron, lead, and copper in surface water runoff leaving the facility. In an attempt to improve surface conditions, Sherwin Williams removed approximately 36 million pounds of residue from 10 acres of plant property. Despite the attempts made to reduce the volume of the residue piles, there remains a large portion of the property covered with furnace residue. Aerial photographs from 1950, 1956 and 1978 shows residue piles located on the west and southwest portions of the property. A pond was also shown to be present on the southwest portion of the facility. The pond was constructed with furnace residue, observed during the site reconnaissance, to berm the drainage pathway and restrict surface water flow. During the site reconnaissance, Mr. Youngless commented that Eagle Pitcher allowed residents of Hillsboro to swim in the pond before a public swimming pool was constructed. Due to the potential liability concerns, public access to the pond was restricted and the pond was eventually drained. The exact date the pond was drained is currently unknown.

Eagle Zinc Company had a laboratory in the main office building. This laboratory is currently used to analyze the quality of zinc produced. Acids and solvents are used in the laboratory which are discharged to the Hillsboro sanitary sewer system. Waste oil is generated from maintenance of on-site equipment and collected in 55 gallon barrels. The used oil is picked up periodically at the facility by an oil recycling company. No solvents or parts washers are currently used in the maintenance

shop.

2.4 APPLICABILITY OF OTHER STATUTES

The zinc company facility was privately owned and operated since 1917 to the present date. Because of it's years of operation, and the type of materials used and waste generated, it was not subject to RCRA corrective action activities. The facility was also not subject to regulation under jurisdiction of, Federal Insecticide, Fungicide, and Rodent Act (FIFRA), Atomic Energy Act (AEA), Uranium Mil Tailing Radiation Control Act (UMTRCA).

3. SITE INSPECTION ACTIVITIES AND ANALYTICAL RESULTS

3.1 INTRODUCTION

Information within this section outlines procedures utilized and observations made during the CERCLA Expanded Site Inspection conducted at the Eagle Zinc Company facility. Individual subsections address the site representative interview, reconnaissance inspection field sampling procedures, analytical results and key sample summary. The Expanded Site Inspection for Eagle Zinc Company was conducted in accordance with the work plan, which was developed and submitted to the USEPA Region V Offices prior to the initiation of field activities.

The U.S Environmental Protection Agency Potential Hazardous Waste Site Inspection Report (Form 2070-13) for Eagle Zinc Company is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Prior to the CERCLA Site Inspection a number of telephone interviews were conducted between Mr. Brad S. Taylor with the IEPA, and Plant Manager of Eagle Zinc Company Mr. Tom Youngless. The interviews were conducted to gather information on past and present activities at the facility. On October 1, 1993 an interview was conducted with Mr. Tom Youngless. Present at this interview were Brad Taylor, Greg Spencer, Sheri Adams, Rich Johnson with the IEPA, and Mr. Weldon Kunzeman with Montgomery County Health Department. An explanation of the CERCLA Pre-Remedial process and sampling plans occurred at that time. Mr. Youngless was given the option of receiving split samples collected during the CERCLA Expanded Site Inspection sampling event. Specific sampling dates were discussed, and arrangements made to allow Illinois EPA access to collect samples from the property.

3.3 RECONNAISSANCE INSPECTION

Mr. Youngless provided a tour of the facility on October 1, 1993 and described general plant operations. The plant operated 7 days a week with 34 employees, and was in operation during the site reconnaissance. The main scope of this investigation was to determine whether metal concentrations have exceeded established environmental benchmarks and indicate pathways of concern. During the tour of the facility grounds, sampling locations were selected.

Among some of the structures which were no longer used was an

old retired smokestack. The smokestack appeared to have been used for a long period of time based on it's dilapidated condition. There was also a stack on the rotary furnace which was still in use at the time of the site inspection. The air pathway was determined to be one potential route of migration for contaminants to leave the facility. An indication that contaminants may have migrated from the facility was the observation of stressed vegetation around the site. Trees on the facility and on property immediately adjacent to the zinc facility appeared stunted in growth. Some of the trees north and east of the zinc plant were lacking foliage and appeared dead. Ground vegetation such as grasses and weeds were lacking in areas throughout Eagle Zinc property, especially in areas with furnace residue. Areas where surface runoff around the facility had occurred, ground vegetation ranged from minimal to lacking. Residue piles primarily found on the southwest portion of the property were barren of any vegetation.

The nearest resident to the Eagle Zinc property was located approximately 200 feet west of the southwest property boundary. The most heavily populated residential area was west of the facility. South and southeast of Eagle Zinc was the second most populated residential area. East and north of Eagle Zinc was scarcely populated and considered rural (Appendix A). A sampling strategy was selected which would determine if contaminants could be found in residential properties near Eagle Zinc Company (Figure 3-2).

Surface water leaving the facility was deemed to be a potential concern because of the potential for surface water

contamination. There were essentially two defined surface water routes which originated on the property (Appendix A). The first surface water drainage route originated directly north of a building called the Zebra operation, which was the northern most building of the Eagle Zinc plant. Surface drainage from the northern portion of the property emptied into this intermittent stream. Water in the stream traveled east under Industrial Drive road and eventually emptied into old Lake Hillsboro located northeast of the facility (Appendix A). The second drainage route originated west of the facility buildings, due to rainfall collected in this area. Surface water traveled toward the southwest portion of the property into a small pond which was dammed on the south and west sides by furnace residue. The dam was approximately 40 feet at the highest point, although it was intentionally breached in order to lower the depth of the impounded waters. It is currently unknown what year the dam was breached. Once the water overflowed the breach in the dam it traveled west of the facility and eventually emptied into the Middle Fork Shoal Creek (Appendix A). With the exception of the dam, there were no forms of containment on either surface water drainage routes which would retain the zinc residue on the property. During the facility tour, residue materials were observed in both drainage pathways after they left Eagle Zinc property.

The sampling team arrived at the facility on October 26, 1993 at 8:00 A.M. Upon arrival, an introduction with Mr. Tom Youngless, plant manager for Eagle Zinc Co., and IEPA field sampling members

transpired. Mr. Youngless was unable to accompany IEPA personnel during the field sampling event due to company duties which required his attention. Therefore, Mr. Jerry Lovelady who was employed by Eagle Zinc, as a chemist, accompanied IEPA personnel during October 26 and 27, 1993 field activities and received split samples. The IEPA sampling team consisted of Brad Taylor, Greg Spencer, Bruce Everetts, Mark Wagner, and Kim Hubbert.

3.4 SOIL/SEDIMENT SAMPLING

Sampling plans involved the collection of 28 soil and sediment samples from both on the facility and adjacent properties. Soil and sediment samples were collected by use of a stainless steel trowel at various locations and depths to determine if contamination was present at the facility to characterize the nature of the wastes.

The Target Compound List (TCL) is provided in Appendix C of this report. On October 26-27, 1993, IEPA personnel collected eight sediment samples, and 20 soil samples. Sediment samples were analyzed for the Target Compound List and all soil samples were analyzed for inorganic compounds only. Mr. Jerry Lovelady with Eagle Zinc Company accompanied the IEPA sampling team during sample collection and chose to collect split samples. Mr. Tom Youngless, plant manager at Eagle Zinc, also joined IEPA sampling team periodically during field activities. Figure 3-2 indicates the locations of all samples collected. Table 3-1 gives a brief description of each sample.

The twenty-eight soil and sediment samples were collected to determine if surficial contamination existed at the Eagle Zinc facility or whether these contaminants have migrated from the property. Samples from each sampling point were placed into their respective glass containers in the following fashion: volatile jar filled first, semi-volatile organic jar second, and inorganic jar third. After sampling each location, all sample containers were capped with their respective lids and placed in coolers. An HNU meter was not used during sampling because volatiles and semi-volatile compounds were not suspected to be present at the facility.

Samples X103, X104, and X105 were collected within the boundaries of the facility. X103 and X105 were sampled from residue piles on the property (Figure 3-2). X104 was a soil sample taken north of the Zebra building (Figure 3-2). All facility samples were collected within the top four inches using a stainless steel trowel.

The remaining soil samples were collected from residential properties surrounding the Eagle Zinc Company property. Samples of soil were collected from residential yards and within 200 feet of the homes. Each sample located on Figure 3-2 was collected with a stainless steel trowel at 0-4 inches in depth. Soil sample appearance and sampler comments were recorded in a field log book. Measurements of where the sample was collected in relation to the residence were also recorded.

A background soil sample, X101, and duplicate, X102, were

collected from the nearby village of Butler. This sampling location was selected based on comparable soil types and its location from the smelting operations. Butler was a small town located in a rural agricultural community northwest of Hillsboro approximately four miles. The purpose of selecting a sample in Butler was an attempt to account for similar environmental factors found in Hillsboro. Inorganic compounds found in the background soil should be representative of inorganic concentrations native to Hillsboro\Butler, Illinois communities.

Sediment Sampling

Sediment samples were collected on October 26, 1993 along the surface water routes which originated on Eagle Zinc property. Each sample was collected in the order described below with downstream samples collected first and upstream samples last. Sample X208, downstream sample, was the first sediment sample collected 134 feet upstream from Lake Hillsboro. The sample was collected from the east bank at a depth of 0-4 inches. A sample was chosen at this location to determine whether contaminants were present within sediment of this drainageway. Collection was accomplished with a decontaminated stainless steel trowel.

Sample X204 was the first sample collected from the intermittent stream located west of Eagle Zinc. The sample was collected upstream from discharge pipes associated with the municipal sewage treatment plant. A road used by public works vehicles was located 215 feet downstream of X204. The intermittent

stream was approximately three feet wide and had approximately 4-6 inches of water with a moderately steady flow. Sides of the stream bank drop approximately 6 feet below the surrounding topography.

Sample X203 was collected from the intermittent stream, upstream from sampling point X204, near Hillsboro's water treatment plant. The sample was taken from the east bank of the stream in an area of sediment deposition. The purpose of collecting this sample was to determine whether contaminants have migrated downstream from the facility. Sediment was collected using a stainless steel hand trowel at a depth of 0-4 inches.

Samples X201, and duplicate sample X202, were collected from the intermittent stream west of Eagle Zinc (Figure 3-2). These two samples served to provide background concentration information for all sediment samples collected during the Expanded Site Inspection. Samples X201 and X202, were located upstream of X203 and therefore believed not to be affected by surface drainage from the Eagle Zinc property. The sample was taken from the west bank of the stream at the confluence of the two intermittent streams. Sediments were collected from approximately zero to four inches by use of a stainless steel trowel. Prior to collecting this sample, sediments were placed in a stainless steel tray and mixed thoroughly using a trowel.

Sample X207 was collected from the stream north of Eagle Zinc. The sample was located in the streambed 70 feet west of Industrial Drive, which runs North-South on the east side of Eagle Zinc property. Sediments were collected using a stainless steel hand

trowel from 0-4 inches in depth. Flow of the stream was low at the time of collection and drained toward the east into Lake Hillsboro. Residue piles were located along the drainage pathway and residue materials appeared to have entered the stream. The purpose of taking this sample was to document whether contaminants have entered the surface water drainageway.

Sample X205 was collected from the surface drainage route on the west side of Eagle Zinc property. The sediment sample was collected immediately downstream of the retention pond located on the facility. A sample of the sediments were collected using a stainless steel trowel at a depth of 0-4 inches. Flow of the stream at the time the sample was taken was low. The purpose of this sample was to determine if hazardous substances had migrated from the facility, along the intermittent stream.

Sample X206 was the final sediment sample collected. The sample was located in the surface water drainage route, directly west of the zinc facility. The area west of the plant, slopes toward the southwest corner of the property where the pond is located (Appendix I). Surface runoff from around the facility and residue deposited throughout the site may have migrated toward this area due to sloping topography. X206 was collected before sediments reached the facility pond. Sediments were collected using a stainless steel hand trowel at a depth of 0-4 inches. Purpose of this sample was to determine whether contaminants had migrated toward the facility pond.

Decontamination Procedures

Standard Illinois Environmental Protection Agency decontamination procedures were followed prior to collection of all samples. All sampling equipment had been previously decontaminated at the Illinois EPA's decontamination room prior to its transport to the facility. Decontamination procedures included the cleaning of all equipment with a liquid Alconox solution, rinsing with hot tap water, rinsing with a 50% mixture of acetone and water, rinsing with hot tap water again and with distilled water as a final rinse. All equipment was either dried with paper towels or air dried, then wrapped and stored in heavy duty aluminum foil.

TABLE 3-1
SAMPLE DESCRIPTIONS

SAMPLE	DEPTH	APPEARANCE	LOCATION
X101	0-4"	Dark Black Loam No sand or clay noted Soil was very heavy and moist	Taken 98 feet north of the northeast corner of residence and 51 feet west of street.
X102	(Duplicate of X101)		
X102	0-4"	Same as X101	Same as X101
X103	0-4"	Dark brown silty loam with a large amount of organic material	Area on the northwest portion of the Eagle Zinc site. Collected 107 feet west of the security gate and 8 feet south of the on-site road.
X104	0-4"	Soil is brown silty loam.	Sample was collected 144 feet north of the Zebra building of Eagle Zinc facility.
X105	0-4"	Sample was dark black cinder material from the residue pile.	Sample was collected 165 feet west of a telephone pole on the southwest corner of the property.
X106	0-4"	Soil light brown loam.	Sample was collected 19 feet south of Blue-grey residence and 172 feet west of Lake Drive road.
X107	0-4"	Dark brown loam with a small amount of clay. Moss was noticed where the sample was collected.	Collected 56.6 feet south of the southwest corner of the residence and 60 feet west of Bowles Street.
X108	0-4"	Darker silt loam. No moss noticed.	Collected on the southeast corner of the property, 43.6 feet west of the fence running north-south and 10 feet north of fence running east-west.
X109	0-4"	Dark brown silt loam. No sand or clay noticed.	Sample collected 152 feet south of southwest corner of residence and 48 feet of Welch Street.
X110	0-4"	Brown silt loam with small amount of clay.	Sample collected 106 feet southeast of the southeast corner of residence and 108 feet west of the residue constructed dam on Eagle Zinc property.
X111	0-4"	Dark loam with more sand compared to other samples.	Sample collected 150 feet north of residence and 25 feet west-southwest of a telephone pole.
X112	0-4"	Dark silt loam.	Sample collected 153 feet south of southeast corner of the school gymnasium and 186 feet west of property fence.
X113	0-4"	Dark loam with a tight soil matrix more clay present.	Sample collected 239 feet south of fence for baseball field and 131 feet west fence for football field. Sample was taken in the baseball field.

X114	0-4"	Dark silt loam.	Sample collected 33 feet east of the southeast corner of the residence and 72 feet north of Ash Street.
X115	0-4"	Dark silt loam.	Sample collected 37 feet south of the residence and 43 feet east of Virginia Street.
X116	0-4"	Soil dark loam. Some moss on soil.	Sample collected 37 feet north residence and 66 feet east of Beal Street.
X117	0-4"	Dark silt loam.	Sample collected 13.6 feet north of northwest corner of residence and 94.9 feet west of Schram Avenue.
X118	0-4"	Light brown silt loam.	Sample collected 35 feet south of the southwest corner of the residence.
X119	0-4"	Light brown silt loam.	Sample collected 50 feet north of the northwest corner of the residence.
X120	0-4"	Light brown silt loam.	Sample collected 157 feet west off the northwest corner of the residence and 47 feet north of the property fence.
X201	0 - 4"	Large amount of sand present. Fine grey-black silt noted.	Sediment sample collected south of Eagle Zinc upstream of surface runoff from Eagle Z. (Background sample)
X202	(Duplicate of X201)		
X203	0 - 4"	Large amount of sand in sediments. Silty loam with medium size gravel. Bubbles noted in water.	Sediment sample collected off the southwest corner of Hillsboro Water Plant. Sample collected 46 feet southwest of a concrete water fill staion and 30 feet NW of fire hydrant.
X204	0 - 4"	Fine grained sand and black silty material in sediment. Large amount of sand and medium-large gravel in the stream bed.	Sample was collected 215 feet upstream from a concrete culvert driveway used by Hillsboro sanitary department.
X205	0 - 4"	Sediments mainly clay with some organic material. Small amount of silt. Alot of moss noted on the ground.	Sediments collected 41 feet west of the residue constructed dam on Eagle Zinc and 104 feet south of the break in the levy.
X206	0 - 4"	Sediments appeared black in color. Area was moss covered and spongy when walked on.	Sediments collected west of Eagle Zinc facility upstream of the on-site pond. Telephone pole located 151 feet west-southwest of the sample point.
X207	0 - 4"	Sediment was dark clay with some silt. Alot of moss in stream.	Sediment collected north of Eagle Zinc facility, 70 feet west of Industrial Drive road.
X208	0 - 4"	Sediments dark silty loam with a large amount of organic material.	Sample was collected 134 feet upstream of Lake Hillsboro.

3.5 ANALYTICAL RESULTS

Chemical analysis of soil/sediment samples collected by IEPA personnel during the CERCLA Expanded Site Inspection revealed quantified and estimated values of volatiles, semi-volatiles, pesticides, heavy metals, common laboratory artifacts and common soil constituents. Analysis of the samples were performed by Illinois Environmental Protection Agency Division of Laboratories. Qualification of the final organic and inorganic data packages were also performed by the Quality Assurance section of the Illinois EPA Division of Laboratory Services located in Springfield, Illinois. Reference Table 3-2 for the summary of soil and sediment sample chemical analysis results. Complete laboratory analytical data of Eagle Zinc's sample analysis are provided in Appendix J of this report.

SITE NAME: EAGLE ZINC COMPANY ILD 980606941		TABLE 3-2 SEDIMENT SUMMARY						
SAMPLING POINT	X201 Backgd. Sediment	X202 Dup of X201 Sediment	X203 Sediment	X204 Sediment	X205 Sediment	X206 Sediment	X207 Sediment	X208 Sediment
PARAMETER								
VOLATILES UG/KG								
Methylene Chloride	--	--	--	--	--	160.0 J	--	--
Acetone	11.0 J	22.0	12.0 J	22.0 W	37.0 J	76.0 J	--	17.0 W
2-Butanone (MEK)	14.0 W	4.0 J	6.0 J	22.0 W	20.0 J	48.0 J	14.0 W	17.0 W
1,1,1-Trichloroethane	--	--	17.0 W	27.0 J	9.0 J	290.0 J	--	8.0 J
Carbon Tetrachloride	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Bromodichloromethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
1,2-Dichloropropane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
cis-1,3-Dichloropropene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Trichloroethene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Dibromochloromethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
1,1,2-Trichloroethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Benzene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Trans-1,3-Dichloropropene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Bromoforn	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
4-Methyl-2-Pentanone	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
2-Hexanone	14.0 W	14.0 W	17.0 W	22.0 W	14.0 W	36.0 W	14.0 W	17.0 W
Tetrachloroethene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Toluene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
1,1,2,2-Tetrachloroethane	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Chlorobenzene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Ethylbenzene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Styrene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Xylene(total)	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
SEMIVOLATILES UG/KG								
4-Chloroaniline	470.0 W	470.0 W	560.0 W	730.0 W	480.0 W	1200.0 W	440.0 W	560.0 W
2-Methylnaphthalene	--	--	--	--	100.0 J	--	--	--
3-Nitroaniline	1100.0 W	1100.0 W	1400.0 W	1800.0 W	1200.0 W	2800.0 W	1100.0 W	1400.0 W
4-Nitroaniline	1100.0 R	1100.0 R	1400.0 R	1800.0 R	1200.0 R	2800.0 R	1100.0 R	1400.0 R
Phenanthrene	--	--	260.0 J	1900.0	--	--	--	--
Anthracene	--	--	--	320.0 J	--	--	--	--
Carbazole	--	--	--	290.0 J	--	--	--	--
Fluoranthene	--	--	520.0 J	1700.0	--	--	130.0 J	--
Pyrene	--	--	520.0 J	1600.0	--	--	140.0 J	--
3,3'-Dichlorobenzidine	470.0 W	470.0 W	560.0 W	730.0 W	480.0 W	1200.0 W	440.0 W	560.0 W
Benzo(a)anthracene	--	--	230.0 J	650.0	--	--	100.0 J	--
Chrysene	--	--	310.0 J	670.0 J	--	--	120.0 J	--
bis(2-Ethylhexyl)phthalate	--	--	660.0	--	--	--	--	--
Benzo(b)fluoranthene	--	--	480.0 J	--	--	--	140.0 J	--
Benzo(k)fluoranthene	--	--	--	1200.0	--	--	--	--
Benzo(a)pyrene	--	--	230.0 J	810.0	--	--	--	--

SITE NAME: EAGLE ZINC COMPANY								
ILD 980605941		TABLE 3-2 SEDIMENT SUMMARY						
SAMPLING POINT	X201	X202	X203	X204	X205	X206	X207	X208
PARAMETER	Backgd. Sediment	Dup of X201 Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
PESTICIDES UG/KG								
alpha-BHC	---	---	---	---	---	1.5 J	---	---
beta-BHC	---	---	---	---	---	1.0 JP	---	---
gamma-BHC (Lindane)	---	---	---	---	---	1.1 JP	---	---
Aldrin	---	---	4.4 P	---	---	---	---	---
Heptachlor epoxide	---	0.2 JP	---	1.3 JP	---	4.7 J	---	---
Dieldrin	2.3 J	2.6 J	16.0 P	12.0 P	---	10.0 J	---	1.3 JP
4,4'-DDE	---	0.4 JP	---	---	---	0.7 JP	---	---
Endrin	0.3 JP	0.9 J	16.0 P	12.0	2.4 J	---	---	2.8 JP
Endosulfan II	---	---	---	---	---	---	---	3.6 JP
4,4'-DDD	0.4 JP	0.9 JP	7.5 P	6.0 JP	---	1.8 JP	---	5.1 J
4,4'-DDT	3.7 J	0.4 J	11.0 P	15.0 P	---	4.8 J	---	---
Methoxychlor (Mariate)	---	---	---	---	---	13.0 J	---	---
Endrin Ketone	---	0.5 J	---	---	1.6 J	---	---	---
alpha-Chlorodane	2.0 JP	3.1 P	16.0 P	7.0 P	---	1.7 JP	---	0.6 J
gamma-Chlorodane	2.0 J	2.5	15.0 P	7.4 P	---	3.0 J	---	0.7 JP
Toxaphene	---	110.0 JP	---	---	---	---	---	320.0 P
Aroclor-1254	---	---	250.0	120.0	---	---	---	24.0 JP
Aroclor-1260	17.0 J	9.3 J	110.0 P	100.0	---	---	---	---
INORGANICS MG/KG								
Aluminum	6630.0	6390.0	7370.0	14900.0	8360.0	16300.0	10700.0	9810.0
Antimony	9.0 J	10.4 J	10.3 J	17.4 J	9.3 J	62.7 J	10.7 J	10.8 J
Arsenic	4.6	4.3	6.4	10.9	2.9	19.4	6.0	6.0
Barium	79.5	70.4	99.9	97.4	89.6	383.0	167.0	92.5
Beryllium	0.4 B	0.4 B	0.5 B	0.6 B	0.5 B	1.5 B	0.7 B	0.6 B
Cadmium	0.7 B	---	8.6	7.4	1.8	523.0	11.1	19.6
Calcium	6380.0	5520.0	20300.0	12000.0	4680.0	8260.0	1510.0	3020.0
Chromium	9.9	9.9	12.1	13.2	11.0	28.6	14.6	13.7
Cobalt	6.1 B	4.9 B	6.0 B	6.1 B	4.5 B	353.0	10.6 B	4.7
Copper	11.9	11.2	37.9	41.9	9.0	1420.0	20.8	52.2
Iron	10100.0	9120.0	12400.0	14300.0	10900.0	62400.0	14900.0	14500.0
Lead	46.4	35.0	101.0	72.6	10.2	932.0	76.0	125.0
Magnesium	2780.0	2390.0	3330.0	2980.0	2620.0	4970.0	1500.0	1930.0
Manganese	501.0	364.0	722.0	451.0	85.9	3500.0	1470.0	461.0
Mercury	---	---	0.2	0.1 B	---	0.7	---	0.3
Nickel	9.2 B	8.7 B	11.5	14.7 B	12.6	583.0	11.9	12.7
Selenium	0.3 J	0.3 J	0.3 J	0.4 J	0.3 J	4.1	0.3 J	0.4 J
Silver	0.2	---	---	---	---	14.1	---	---
Sodium	73.3 B	79.5 B	132.0 B	150.0 B	84.7 B	470.0 B	82.0 B	110.0 B
Thallium	0.3 J	---	---	0.4 J	0.3 J	3.8 J	0.3 J	0.4 J
Vanadium	17.9	17.4	19.0	26.3	20.6	52.9	41.2	27.2
Zinc	326.0	291.0	2200.0	3040.0	5690.0	156000.0	2410.0	3280.0

SITE NAME: EAGLE ZINC CO.

ILD 980606941

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT PARAMETER	X101 Backgd. Soil	X102 Dup of X101 Soil	X103 Soil	X104 Soil	X105 Soil	X106 Soil
INORGANICS MG\KG (ppm)						
Aluminum	12400.00	10000.00	14900.00	6880.00	7430.00	13000.00
Antimony	8.90 J	9.20 J	13.90 J	10.60 J	11.40 J	9.40 J
Arsenic	5.80	5.70	5.00	6.60	86.30	6.20
Barium	230.00	265.00	112.00	181.00	379.00	224.00
Beryllium	0.80 B	0.81 B	0.68 B	0.49 B	0.83 B	0.63 B
Cadmium	--	--	3.20	3.20	47.20	0.89 B
Calcium	10600.00	9880.00	2010.00	598.00 B	1930.00	11600.00
Chromium	16.20	14.40	15.90	10.30	22.60	15.10
Cobalt	4.10 B	6.50 B	12.00 B	13.70	20.10	11.10
Copper	20.00 J	19.70 J	201.00 J	30.60 J	911.00 J	24.70 J
Iron	14700.00	14400.00	13900.00	11500.00	104000.00	15400.00
Lead	148.00	236.00	260.00	61.00	5760.00	28.50
Magnesium	2370.00	2090.00	1970.00	1040.00 B	1630.00	2150.00
Manganese	434.00	686.00	915.00	1180.00	178.00	922.00
Mercury	0.17	0.18	--	--	--	--
Nickel	13.50	11.50	20.00	27.10	55.90	14.00
Potassium	1890.00	1600.00	1120.00 B	491.00 J	300.00 J	1060.00 J
Selenium	--	1.30 J	0.31 J	0.27 J	1.30	--
Silver	--	--	--	--	6.30	--
Sodium	106.00 B	87.90 B	47.80 B	47.50 B	39.60 B	37.40 B
Thallium	0.33 B	0.34 J	0.31 J	1.20 J	1.30 J	0.26 J
Vanadium	28.50	27.10	28.20	27.50	22.60	28.50
Zinc	136.00	138.00	5580.00	4770.00	31700.00	1490.00

SITE NAME: EAGLE ZINC CO.

ILD 980606941

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT	X107	X108	X109	X110	X111	X112
PARAMETER	Soil	Soil	Soil	Soil	Soil	Soil
INORGANICS MG/KG (ppm)						
Aluminum	13000.00	11500.00	10200.00	15000.00	13500.00	9950.00
Antimony	10.50 J	13.00 J	9.30 J	7.90 J	9.00 J	10.20 J
Arsenic	8.70	13.40	4.60	13.60	8.50	6.20
Barium	124.00	267.00	130.00	150.00	193.00	233.00
Beryllium	0.72 B	1.00 B	0.60 B	0.78 B	0.94 B	0.85 B
Cadmium	3.50	11.30	0.71 B	2.00	1.60	2.80
Calcium	5360.00	5430.00	2580.00	3450.00	8380.00	2800.00
Chromium	16.10	23.40	13.40	20.70	20.20	14.80
Cobalt	5.60 B	14.80	6.90 B	8.50 B	7.80 B	11.30 B
Copper	36.40 J	104.00	15.30	22.50	33.80	15.90
Iron	14900.00	33900.00	12600.00	20700.00	19600.00	13900.00
Lead	105.00	388.00	47.00	87.60	70.80	70.10
Magnesium	2090.00	1630.00	1530.00	2500.00	1950.00	1760.00
Manganese	600.00	1670.00	660.00	563.00	491.00	2070.00
Mercury	0.16	0.16	0.11 B	--	0.11 B	0.11 B
Nickel	15.90	35.10	11.00	15.90	16.50	22.90
Potassium	1160.00 J	--	1650.00	1980.00	1920.00	1970.00
Selenium	--	0.84 J	0.31 J	0.49 J	0.42 J	0.39 J
Silver	--	--	--	--	--	--
Sodium	71.80 B	178.00 B	65.70 B	62.80 B	120.00 B	52.40 B
Thallium	0.35 J	1.40 J	0.28 J	--	0.25 J	0.28 J
Vanadium	27.30	37.70	24.70	38.70	34.20	28.20
Zinc	2480.00	2280.00	360.00	606.00	488.00	489.00

SITE NAME: EAGLE ZINC CO. ILD 980606941	TABLE 3-2 SOIL SUMMARY				
SAMPLING POINT	X113	X114	X115	X116	X117
PARAMETER	Soil	Soil	Soil	Soil	Soil
INORGANICS MG\KG (ppm)					
Aluminum	16600.00	9750.00	14800.00	12500.00	13800.00
Antimony	7.80 J	8.40 J	11.10 J	9.90 J	14.50 J
Arsenic	5.60	11.90	10.50	7.10	8.50
Barium	116.00	183.00	181.00	227.00	222.00
Beryllium	0.85 B	1.00	0.80 B	0.93 B	1.70
Cadmium	0.68 B	2.90	1.48	2.30	4.80
Calcium	5940.00	4230.00	4970.00	8430.00	19300.00
Chromium	21.70	15.90	19.40	18.90	17.30
Cobalt	10.60	5.80 B	7.00 B	9.80 B	10.60 B
Copper	22.50	28.30 J	27.80 J	25.50 J	57.20 J
Iron	20400.00	28600.00	19700.00	18900.00	21100.00
Lead	75.10	137.00	76.20	147.00	186.00
Magnesium	4870.00	1130.00	2030.00	2020.00	2140.00
Manganese	568.00	314.00	538.00	851.00	995.00
Mercury	---	---	0.42	0.24	0.14 B
Nickel	18.60	14.40	10.90	16.50	27.50
Potassium	2400.00	1040.00	1470.00	1750.00	1460.00 J
Selenium	0.27 J	0.76 J	0.52 J	0.53 J	0.35 J
Silver	---	---	1.20	---	---
Sodium	45.80	293.00 B	61.50 B	89.90 B	1020.00 B
Thallium	0.27 J	0.71 J	0.57 J	0.53 J	0.35 J
Vanadium	33.70	29.70	34.80	35.10	34.30
Zinc	451.00	1580.00	638.00	998.00	7420.00
page 3					

SITE NAME: EAGLE ZINC CO.			
ILD 980606941			
	SOIL	TABLE 3-2 SUMMARY	
SAMPLING POINT	X118	X119	X120
PARAMETER	Soil	Soil	Soil
INORGANICS MG\KG (ppm)			
Aluminum	14100.00	9390.00	16300.00
Antimony	10.90 J	8.30 J	8.00 J
Arsenic	5.90	6.70	10.70
Barium	106.00	196.00	155.00
Beryllium	0.73 B	0.60 B	0.95
Cadmium	--	2.80	--
Calcium	1720.00	12100.00	2870.00
Chromium	18.50	13.70	20.40
Cobalt	11.10 B	14.90	7.40 B
Copper	15.90 J	17.50 J	17.20 J
Iron	18200.00	14100.00	22900.00
Lead	30.40	51.90	32.70
Magnesium	2120.00	1790.00	2870.00
Manganese	795.00	1520.00	889.00
Mercury	--	0.32	--
Nickel	12.80	14.80	16.90
Potassium	1210.00 J	1670.00	1490.00
Selenium	0.27 J	0.55 J	0.38 J
Silver	--	--	--
Sodium	--	--	27.70 B
Thallium	0.27 J	0.50 J	0.25 J
Vanadium	34.50 B	26.70	39.00
Zinc	354.00	1570.00	371.00
page 4			

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

3.6 KEY SAMPLES

The following table (Table 3-3) identifies the key samples taken during the Eagle Zinc Company facility Integrated Assessment. Key samples were shown to contain contaminants at a level three times background concentrations or the contaminant was not found in the background sample. For a review of all contaminants detected in samples, reference Table 3-2, Sample Summary. (Table 3-2 can also be found at the front of Volume 2 of 2 of this report).

SITE NAME: EAGLE ZINC CO. ILD 980606941							SITE NAME: EAGLE ZINC CO. ILD 980606941						
TABLE 3-3 KEY SOIL SAMPLES							TABLE 3-3 KEY SOIL SAMPLES						
SAMPLING POINT	X101	X102	X103	X104	X105	X106	SAMPLING POINT	X107	X108	X109	X110	X111	X112
PARAMETER	Backgd Soil	Dup of X101 Soil	Soil	Soil	Soil	Soil	PARAMETER	Soil	Soil	Soil	Soil	Soil	Soil
INORGANICS MG\KG (ppm)							INORGANICS MG\KG (ppm)						
Arsenic	5.80	5.70	--	--	86.30	--	Arsenic	--	--	--	--	--	--
Cadmium	--	--	3.20	3.20	47.20	0.89 B	Cadmium	3.50	11.30	0.71 B	2.00	1.60	2.60
Copper	20.00 J	19.70 J	201.00 J	--	911.00 J	--	Copper	--	--	--	--	--	--
Iron	14700.00	14400.00	--	--	104000.00	--	Iron	--	--	--	--	--	--
Lead	148.00	236.00	--	--	5760.00	--	Lead	--	--	--	--	--	--
Manganese	434.00	686.00	--	--	--	--	Manganese	--	--	--	--	--	2070.00
Nickel	13.50	11.50	--	--	55.90	--	Nickel	--	--	--	--	--	--
Silver	--	--	--	--	6.30	--	Silver	--	--	--	--	--	--
Sodium	106.00 B	87.90 B	--	--	--	--	Sodium	--	--	--	--	--	--
Zinc	136.00	138.00	5580.00	4770.00	31700.00	1490.00	Zinc	2480.00	2280.00	--	606.00	488.00	489.00
PART 1							PART 2						

SITE NAME: EAGLE ZINC CO. ILD 980606941						SITE NAME: EAGLE ZINC CO. ILD 980606941		
TABLE 3-3 KEY SOIL SAMPLES						TABLE 3-3 KEY SOIL SAMPLES		
SAMPLING POINT	X113	X114	X115	X116	X117	SAMPLING POINT	X119	X120
PARAMETER	Soil	Soil	Soil	Soil	Soil	PARAMETER	Soil	Soil
INORGANICS MG\KG (ppm)						INORGANICS MG\KG (ppm)		
Arsenic	--	--	--	--	--	Arsenic	--	--
Cadmium	0.68 B	2.90	1.48	2.30	4.80	Cadmium	2.80	--
Copper	--	--	--	--	--	Copper	--	--
Iron	--	--	--	--	--	Iron	--	--
Lead	--	--	--	--	--	Lead	--	--
Manganese	--	--	--	--	--	Manganese	--	--
Nickel	--	--	--	--	--	Nickel	--	--
Silver	--	--	1.20	--	--	Silver	--	--
Sodium	--	--	--	--	1020.00 B	Sodium	--	--
Zinc	451.00	1580.00	638.00	998.00	7420.00	Zinc	1570.00	--
PART 3						PART 4		

SITE NAME: EAGLE ZINC COMPANY		TABLE 3-3						
ILD 980606941		KEY SEDIMENT SAMPLES						
SAMPLING POINT	X201	X202	X203	X204	X205	X206	X207	X208
PARAMETER	Backgd. Sediment	Dup of X201 Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
VOLATILES UG/KG								
Methylene Chloride	--	--	--	--	--	160.0 J	--	--
Acetone	11.0 J	22.0	--	--	--	76.0 J	--	--
2-Butanone (MEK)	14.0 UJ	4.0 J	--	--	--	48.0 J	--	--
1,1,1-Trichloroethane	--	--	17.0 UJ	27.0 J	9.0 J	290.0 J	--	8.0 J
Carbon Tetrachloride	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Bromodichloromethane	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
1,2-Dichloropropane	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
cis-1,3-Dichloropropene	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Trichloroethene	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Dibromochloromethane	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
1,1,2-Trichloroethane	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Benzene	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Trans-1,3-Dichloropropene	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Bromoforn	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
4-Methyl-2-Pentanone	--	--	17.0 UJ	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Toluene	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
1,1,2,2-Tetrachloroethane	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Chlorobenzene	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Ethylbenzene	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Styrene	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
Xylene (total)	--	--	--	22.0 UJ	14.0 UJ	36.0 UJ	--	17.0 UJ
SEMIVOLATILES UG/KG								
2-Methylnaphthalene	--	--	--	--	100.0 J	--	--	--
Phenanthrene	--	--	260.0 J	1900.0	--	--	--	--
Anthracene	--	--	--	320.0 J	--	--	--	--
Carbazole	--	--	--	290.0 J	--	--	--	--
Fluoranthene	--	--	520.0 J	1700.0	--	--	130.0 J	--
Pyrene	--	--	520.0 J	1600.0	--	--	140.0 J	--
Benzo(a)anthracene	--	--	230.0 J	850.0	--	--	100.0 J	--
Chrysene	--	--	310.0 J	870.0 J	--	--	120.0 J	--
bis(2-Ethylhexyl)phthalate	--	--	660.0	--	--	--	--	--
Benzo(b)fluoranthene	--	--	480.0 J	--	--	--	140.0 J	--
Benzo(k)fluoranthene	--	--	--	1200.0	--	--	--	--
Benzo(a)pyrene	--	--	230.0 J	810.0	--	--	--	--

PART 1

SITE NAME: EAGLE ZINC COMPANY

ILD 980606941

TABLE 3-3
KEY SEDIMENT SAMPLES

SAMPLING POINT PARAMETER	X201 Backgd. Sediment	X202 Dup of X201 Sediment	X203 Sediment	X204 Sediment	X205 Sediment	X206 Sediment	X207 Sediment	X208 Sediment
PESTICIDES UGKG								
alpha-BHC	---	---	---	---	---	1.5 J	---	---
beta-BHC	---	---	---	---	---	1.0 JP	---	---
gamma-BHC (Lindane)	---	---	---	---	---	1.1 JP	---	---
Aldrin	---	---	4.4 P	---	---	---	---	---
Heptachlor epoxide	---	0.2 JP	---	1.3 JP	---	4.7 J	---	---
Dieldrin	2.3 J	2.6 J	16.0 P	12.0 P	---	10.0 J	---	---
Endrin	0.3 JP	0.9 J	10.0 P	12.0	2.4 J	---	---	2.8 JP
Endosulfan II	---	---	---	---	---	---	---	3.6 JP
4,4'-DDD	0.4 JP	0.9 JP	7.5 P	8.0 JP	---	---	---	5.1 J
4,4'-DDT	3.7 J	0.4 J	---	15.0 P	---	---	---	---
Methoxychlor (Mentate)	---	---	---	---	---	13.0 J	---	---
Endrin Ketone	---	0.5 J	---	---	1.6 J	---	---	---
alpha-Chlorodane	2.0 JP	3.1 P	18.0 P	---	---	---	---	---
gamma-Chlorodane	2.0 J	2.5	15.0 P	---	---	---	---	---
Aroclor-1254	---	---	250.0	120.0	---	---	---	24.0 JP
Aroclor-1260	17.0 J	9.3 J	110.0 P	100.0	---	---	---	---
INORGANICS MGKG								
Antimony	9.0 J	10.4 J	---	---	---	62.7 J	---	---
Arsenic	4.5	4.3	---	---	---	19.4	---	---
Barium	79.5	70.4	---	---	---	383.0	---	---
Beryllium	0.4 B	0.4 B	---	---	---	1.5 B	---	---
Cadmium	0.7 B	---	8.6	7.4	---	523.0	11.1	19.6
Calcium	6360.0	5520.0	20300.0	---	---	---	---	---
Cobalt	6.1 B	4.9 B	---	---	---	353.0	---	---
Copper	11.9	11.2	37.9	41.9	---	1420.0	---	52.2
Iron	10100.0	9120.0	---	---	---	82400.0	---	---
Lead	46.4	35.0	---	---	---	932.0	---	---
Manganese	501.0	384.0	---	---	---	3500.0	---	---
Mercury	---	---	0.2	0.1 B	---	0.7	---	0.3
Nickel	9.2 B	8.7 B	---	---	---	583.0	---	---
Selenium	0.3 J	0.3 J	---	---	---	4.1	---	---
Silver	0.2	---	---	---	---	14.1	---	---
Sodium	73.3 B	78.8 B	---	---	---	470.0 B	---	---
Thallium	0.3 J	---	---	---	---	3.8 J	---	---
Zinc	326.0	291.0	2200.0	3040.0	5690.0	15600.0	2410.0	3290.0

PART 2

4. IDENTIFICATION OF SOURCES

4.1 INTRODUCTION

Various waste sources which have been identified in the initial stages of the CERCLA Expanded Site Inspection are discussed in this section.

Information concerning source history, size, volume, waste type, waste composition, and waste contaminant factors of each source was compiled during the initial Site Assessment and subsequent Expanded Site Inspection. It should be pointed out, however, that the total number and nature of the sources at the site may change as more information is received on the facility.

4.2 TAILINGS PILE

The residue piles were located on the southwest portion of the property. Furnace residues were deposited in such a way as to construct a dam and create the pond on the property. Height of the dam measured 41 feet above existing topography. According to Mr. Tom Youngless, and based on aerial photographs, the dam constructed of residue had been there since the 1950's. Additional residue piles were located further east of the dam, closer to Eagle Zinc buildings. An estimated 10 acres of residue piles were observed on the property during the field inspection and review of aerial photographs. Smaller piles of residue were found north and west of the zinc production facility.

Sample X105 was analyzed for inorganic constituents and

revealed elevated concentrations of heavy metals. The pond was the only form of residue containment observed at the facility. Soil covering the residue was non-existent and no evidence was found to indicate a liner under the residue piles.

4.3 CONTAMINATED SOIL

Sample X104 was the only soil sample collected during the field inspection at the facility. Inorganic contaminants found in the soil were similar to those found in the residue piles. Currently the extent of contaminated soil was delineated by analysis of samples collected from residential properties surrounding the zinc facility. Contaminants which exceeded three times background concentrations established the area of contaminated soil (Appendix A). Metals found in significant concentrations included: cadmium, copper and zinc. Contaminants found in residential soils support a release to the air pathway.

4.4 WASTE PILE

The area on the northwest corner of the property contained furnace residue spread over the soil. Several borings were taken with a stainless steel hand auger and found residue greater than three inches in depth. One residue sample, X103, was collected in the northwest portion of the property. Currently the area of waste pile is unknown. Although all areas of the facility where furnace residue had been deposited, including facility roads, can be classified as a waste pile source.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

The CERCLA Site Assessment Program identifies three migration pathways and one exposure pathway by which hazardous substances may pose a threat to human health and/or the environment. Consequently, sites are evaluated on their known or potential impact to these four pathways. The pathways evaluated are groundwater migration, surface water migration, soil exposure, and air migration.

This section presents and discusses information collected during the CERCLA Expanded Site Inspection of Eagle Zinc Company. Information gathered during the inspection, together with information documented in other sources, will be utilized in analyzing the facility's impact on the four pathways and the various human and environmental targets within the established target distance limits.

Discussions of the pathways will include pathway descriptions, contaminant sources, and targets, such as human populations, fisheries, endangered species, wetlands and other sensitive environments.

5.2 GROUNDWATER

Residents located outside the municipal limits of Hillsboro, Taylor Springs, and Schram City are served by private well systems. Well logs provided by the Illinois State Geological Survey document that private wells in Hillsboro are approximately 50 feet deep. A layer of clay ranging from 12 to 18 feet from the surface was

indicated on the well logs. Beneath the clay layer was a layer of sand and gravel approximately six feet thick. Private well water was typically pumped from the sand and gravel formation. The nearest known well in relation to Eagle Zinc Company was approximately 1\2 mile east of the facility.

Due to the distance of the nearest private well, and the nature of the known and suspected contamination, groundwater samples were not collected from residents who utilize private well systems within a four mile radius of the facility.

5.3 SURFACE WATER

According to the water superintendent of Hillsboro, residences within the municipal boundaries of Hillsboro, Schram City, and Taylor Springs are each served public water supplies. Hillsboro draws water from Lake Glenn Shoals and Lake Hillsboro as a source for municipal water supply. Lake Glenn Shoals was used for 75 percent of Hillsboro community water demands and Lake Hillsboro supplied 25 percent. Surface water intakes for Lake Glenn Shoals and Lake Hillsboro were located at the dam of each lake (Appendix A).

Due to elevations and surface topography of the 132 acre facility, overland surface water run-off drained into two separate drainage pathways. The drainage pathway north of the facility received surface runoff from the northern portion of the property and traveled 1\2 mile east until it emptied into Lake Hillsboro (Appendix A).

The second surface water pathway was located on the west side of Eagle Zinc property and received overland surface water drainage from around the zinc company buildings. The drainage pathway extended toward the southwest corner of the property and surface water collected on the western portion in the drainage route. A pond in the southwest corner was at the end of the drainage before surface water left the property. The surface water drainageway continued west into an intermittent stream for 0.92 miles before it emptied into Middle Fork Shoal Creek which was a perennial waterbody. Each of the surface water drainage routes on Eagle Zinc property eventually empty into the Middle Fork Shoal Creek (Appendix A).

Non-wetland, sensitive environments were evaluated by the Illinois Department of Conservation (IDOC) and found to be non-existent on the property or within one-half mile radius of Eagle Zinc Company. Sensitive environments, excluding non-wetland, were not identified along the Middle Fork Shoal Creek waterpath. Targets that exist along the 15-mile surface water pathway include fisheries and wetlands. The Middle Fork Shoal Creek was identified by IDOC as a "moderate aquatic resource." Lake Hillsboro can be classified as a local fishery. During the field inspection there were several fishing type boats and recreational watercraft observed on this lake. Wetlands within Lake Hillsboro consisted of palustrine forested broad leaf deciduous, temporarily flooded and lacustrine limnetic unconsolidated bottom, permanently flooded. The Middle Fork Shoal Creek also contained wetlands in palustrine and

riverine systems. Wetlands in the palustrine system are labeled forested broadleaf deciduous, temporarily flooded and emergent, temporarily flooded. The riverine system contained intermittent streambed, semipermanently flooded and lower perennial unconsolidated bottom, permanently flooded wetlands. According to U.S. Department of Interior wetland maps, approximately 30 miles of wetland frontage existed along the 15-mile surface water target distance.

No surface water samples were collected during the October 26-27, 1993 field inspection of Eagle Zinc Company. However, seven sediment samples and one duplicate sample were obtained from the two intermittent streams leaving zinc company property. The intermittent stream located west of the facility was used for a background sample (X201\X202) to compare downstream sample analysis. Because the intermittent stream north of the facility originated on the property, a background sample was not collected from this drainageway. Analysis of sediment samples can be found in table 3-2 of this report. Samples X206 and X207, collected on the property, contained the highest levels on inorganic contaminants. The inorganics of concern are: arsenic, cadmium, copper, lead and zinc. Cadmium, copper, lead, and zinc levels tended to decrease in samples collected further away from the site. Environmental benchmarks, for the surface water pathway, listed in the Superfund Chemical Data Matrix were exceeded for copper, cadmium, lead and zinc.

Samples X203 and X204 contained elevated levels of PCB's.

Environmental benchmarks had been exceeded in each of these samples. However, there were no PCB's found in samples upstream of X203 and X204 which suggests the contamination may have originated somewhere other than Eagle Zinc property. One potential source of PCB contamination may have been an abandoned Illinois Power plant facility which was located approximately 0.35 miles west of the Eagle Zinc Company property.

5.4 SOIL EXPOSURE

During the October 26-27, 1994 CERCLA ESI twenty soil samples were collected from both the facility and residential properties surrounding the facility. All soil samples collected, were taken within the top four inches. Three samples were collected from the facility, these being X103, X104, and X105. Elevated levels of lead, arsenic, zinc, copper, and cadmium were found in soil and residues on the property.

Seventeen residential soil samples were collected in the vicinity of Eagle Zinc (Figure 3-2). Analysis of samples collected at the facility revealed arsenic, cadmium and lead concentrations exceeding the Removal Action Limits (RAL) established by USEPA. Established RAL's for arsenic were exceeded in residential soil samples X107, X108, X110, X111, X114, X115, X117, and X120.

Analytical results were sent to the Illinois Department of Public Health (IDPH) and reviewed for public health concerns. This review suggested that manganese was the only contaminant significantly above background levels which might cause human

health concerns. The population of concern are children who ingest the soil. IDPH considered this a low potential threat due to the amount and duration of potential exposure.

Within a four mile radius of Eagle Zinc, the population is estimated to be approximately 8,456 people. The nearest residence was located approximately 200 feet off the southwest corner of the property. Although residential properties have been identified within areas of contamination and are therefore counted as on-site population. Soil samples were collected from Hillsboro High School and Beckmeyer Grade School properties and found zinc and cadmium at three times background concentrations. Nearby population within one mile of Eagle Zinc has been calculated to be 6,747 (see Table 5-1). The population count was determined by referencing the 1989-90 Illinois Municipal Directory and USGS topographic maps for the area surrounding the zinc company. Where census information was not available, use of 2.68 persons per household average for Montgomery County was applied.

Table 5-1

Nearby population within one mile of the site

<u>Distance</u>	<u>Population</u>
On-Site	1,311
0 - 1\4 mile	2,973
1\4 - 1\2 mile	1,930
1\2 - 1.0 mile	533

Access to the property was not restricted by fencing, although the plant was in production seven days a week. The facility was located along the northeast edge of Hillsboro municipal limits. There were limited motorcycle tracks observed on the residue piles which suggested the property was used for recreational purposes. According to the Illinois Department of Conservation Records, no sensitive environments existed within one mile of the facility.

5.5 AIR ROUTE

During the field inspection on October 26-27, 1994 there were no air samples collected. A review of residential soil analysis suggested a release to air through plant production processes had occurred. Also due to the large quantity of residue stored in piles on the property, there is potential for material to be dispersed from the property via wind. None of the residue piles identified at the facility had received any type of cover materials.

The Division of Air Pollution Control-Field Operations files were reviewed and found that Eagle Zinc Company had an operating permit from the IEPA. Eagle Zinc was permitted to operate furnaces at the facility using air pollution control equipment. An estimated 8 tons of particulates and 52 tons of sulfur dioxide were expected to be released to air, per year, through furnace emissions.

The approximate number of individuals within a four mile radius of the zinc property are listed in Table 5-2. The nearest resident was located on an area of defined contamination and therefore was considered on-site. No sensitive environments, except

for wetlands, were found on the facility or within one mile of Eagle Zinc Company property (Appendix H).

Table 5-2

Individuals potentially exposed to air-borne contaminants

<u>Distance</u>	<u>Population</u>
On-site	1311
0 - 1\4 mile	2973
1\4 - 1\2 mile	1930
1\2 - 1.0 mile	533
1.0 - 2.0 mile	876
2.0 - 3.0 mile	182
3.0 - 4.0 mile	651
Total	8456

Section 6

BIBLIOGRAPHY

Ecology and Environment Inc. CERCLA Screening Site Inspection Report Eagle Zinc Company. February 1986.

Illinois Department of Conservation. Regarding Sensitive Environments in the vicinity of Eagle Zinc Company, Montgomery County. December 7, 1993.

Illinois Environmental Protection Agency Bureau of Land. CERCLA Preliminary Assessment Report Eagle Zinc Company. September, 1984.

Illinois Environmental Protection Agency Division of Air Pollution Control. Permits for Eagle Zinc Company Hillsboro, Illinois.

Illinois Municipal Directory. 1989-1990.

Illinois Department of Public Health. Review of sample analysis from Eagle Zinc Company and Hillsboro community. February 22, 1994.

Illinois State Water Survey. Hydrology Division. Well logs from Township 8N, Range 3W in Montgomery County.

Taylor, Brad, Il. EPA. Photodocumentation log of Eagle Zinc Company. October 26-27 1993.

U.S. Department of Commerce, Bureau of the Census, " 1990 Census of Population and Housing," Illinois.

U.S.G.S. 1974, Butler, Il. Quadrangle, 7.5 Minute Series.

U.S.G.S. 1974, Sorento North, Il. Quadrangle, 7.5 Minute Series.

U.S.G.S. 1974, Hillsboro, Il. Quadrangle, 7.5 Minute Series.

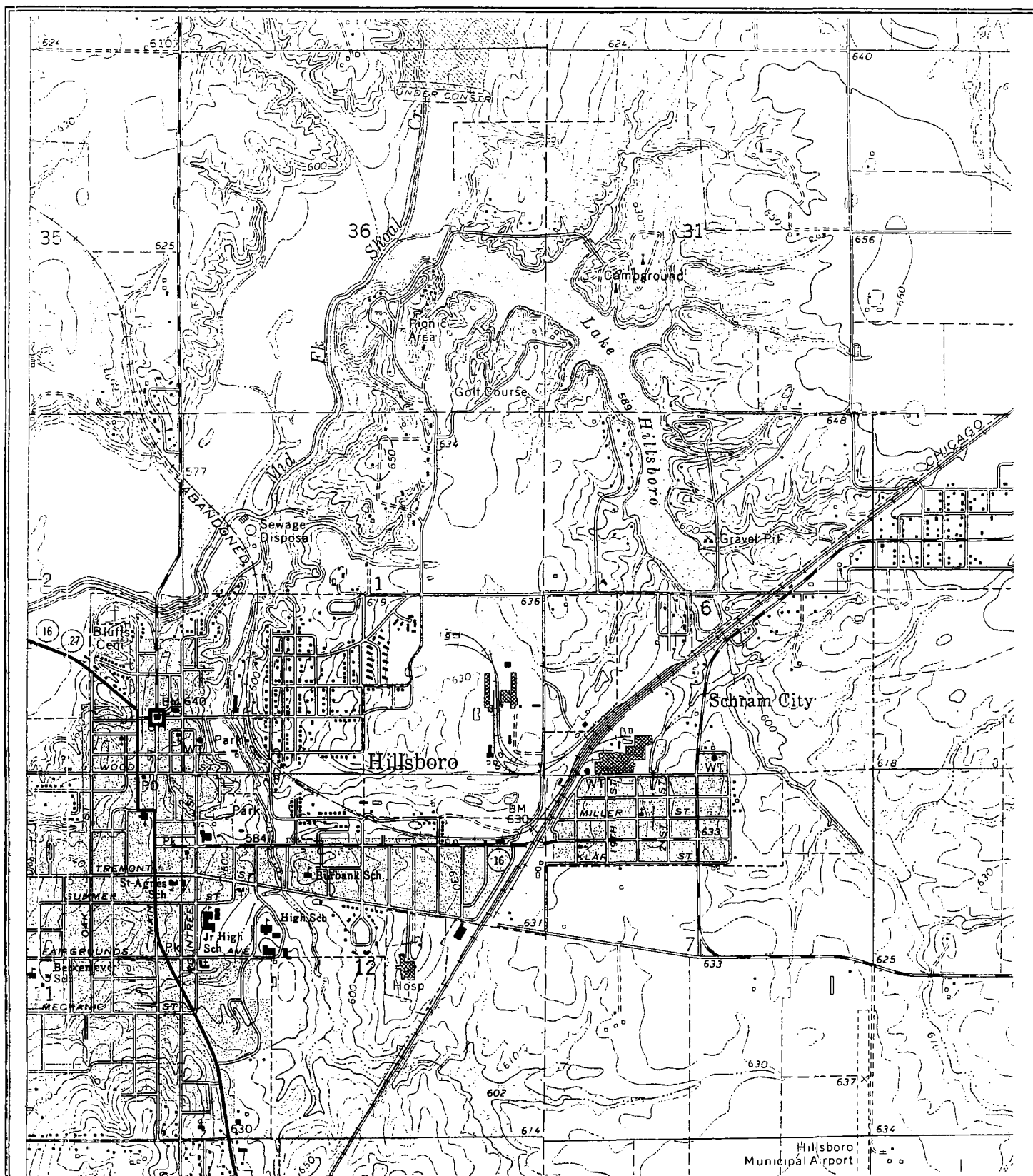
U.S.G.S. 1974, Coffeen, Il. Quadrangle, 7.5 Minute Series.

U.S. Department of the Interior. National Wetlands Inventory. Hillsboro, Butler, Sorento North, Illinois.



SITE LOCATION

Figure 1



○ SITE LOCATION

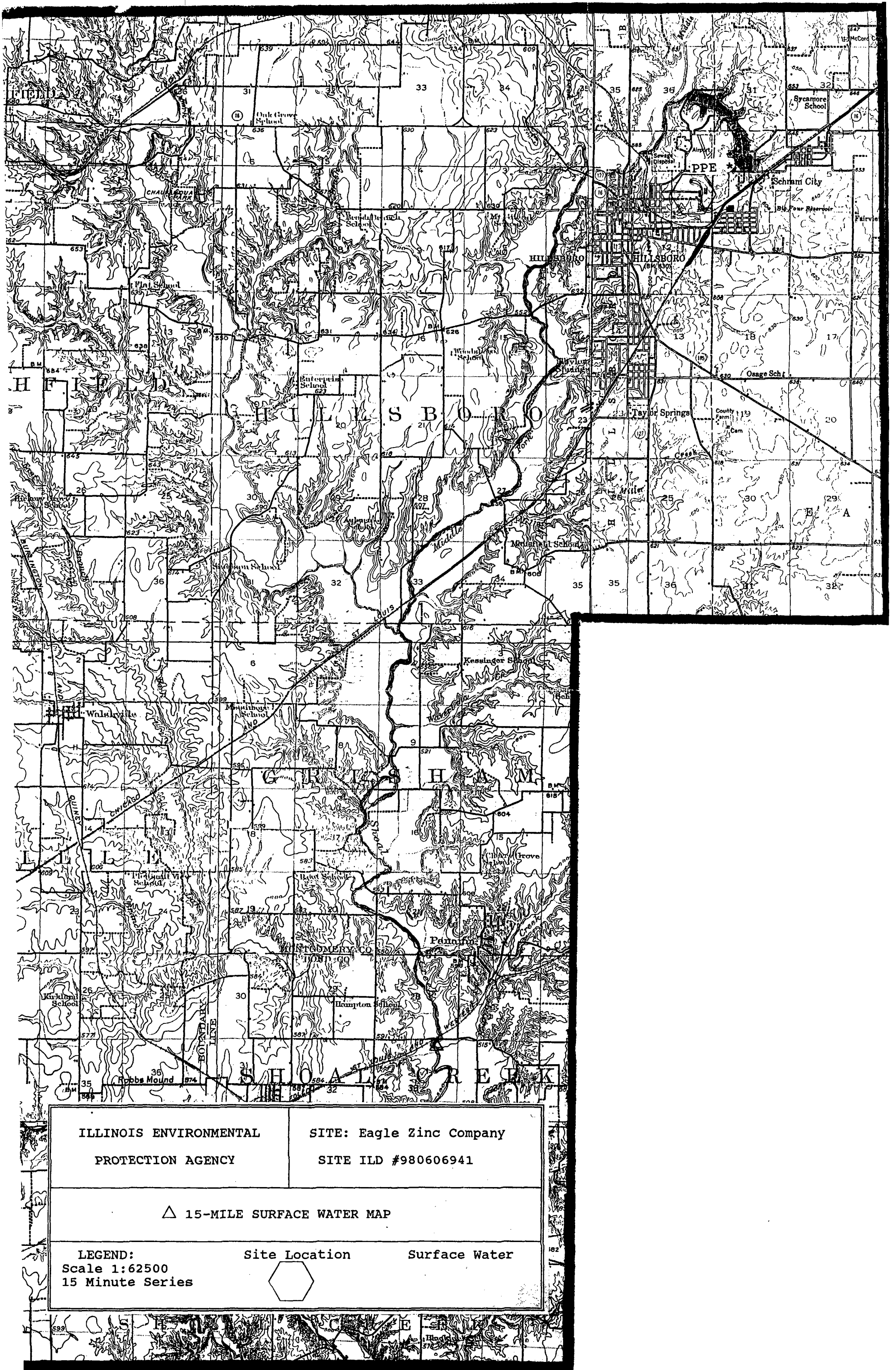
↑
N

EAGLE ZINC COMPANY HILLSBORO, ILLINOIS

Figure 2

44

APPENDIX A
SITE 4-MILE RADIUS MAP
AND
15-MILE SURFACE WATER MAP



46A

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APPENDIX B

U.S. EPA FORM 2070-13



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Eagle Zinc Co.		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER P.O. Box 340				
03 CITY Hillsboro		04 STATE IL	05 ZIP CODE 62049	06 COUNTY Montgomery	07 COUNTY CODE 135	08 CONG DIST 21
09 COORDINATES LATITUDE 39 09 45.0 LONGITUDE 089 29 00.0		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN				

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 10/26/93 MONTH DAY YEAR	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION ~1914 Active BEGINNING YEAR ENDING YEAR
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR (Name of firm) <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR (Name of firm) <input checked="" type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR (Name of firm) <input type="checkbox"/> G. OTHER (Specify)		

05 CHIEF INSPECTOR Brad S. Taylor	06 TITLE Env. Protection Specialist	07 ORGANIZATION IL EPA	08 TELEPHONE NO. 2171524-1660
09 OTHER INSPECTORS Greg Spencer	10 TITLE Env. Protection Specialist	11 ORGANIZATION IL EPA	12 TELEPHONE NO. 2171524-1662
Bruce Everetts	Env. Protection Specialist	IL EPA	2171524-1663
Kim Hubbert	Env. Protection Specialist	IL EPA	2171524-1654
Mark Wagner	LSCT	IL EPA	2171524-1655
			()

13 SITE REPRESENTATIVES INTERVIEWED Tom A. Youngless	14 TITLE Plant Manager	15 ADDRESS P.O. Box 340	16 TELEPHONE NO. 2171532-3971
		Fax #	2171532-2458
			()
			()
			()
			()
			()

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION On-site 10/26/93 8am - 4pm	19 WEATHER CONDITIONS Cool, middle 50°F Sunny to Partly Cloudy
--	--	--

IV. INFORMATION AVAILABLE FROM

01 CONTACT Alan Altar	02 OF (Agency/Organization) U.S. EPA Region V	03 TELEPHONE NO. 3121886-0390		
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Brad S. Taylor	05 AGENCY IL EPA	06 ORGANIZATION State of Illinois	07 TELEPHONE NO. 217-524-1660	08 DATE 12/2/93 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
FL 930606941

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID ☐ E. SLURRY
☒ B. POWDER, FINES ☐ F. LIQUID
☐ C. SLUDGE ☐ G. GAS
☐ D. OTHER _____
(Specify)

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS None

03 WASTE CHARACTERISTICS (Check all that apply)

- ☐ A. TOXIC ☐ E. SOLUBLE ☐ I. HIGHLY VOLATILE
☐ B. CORROSIVE ☐ F. INFECTIOUS ☐ J. EXPLOSIVE
☐ C. RADIOACTIVE ☐ G. FLAMMABLE ☐ K. REACTIVE
☐ D. PERSISTENT ☐ H. IGNITABLE ☐ L. INCOMPATIBLE
☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown	Unknown	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	Unknown	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Arsenic	7440-38-2	All substance were	86.3	PPM
MES	Barium	7440-39-2	Found during the	383	PPM
MES	Cadmium	7440-43-9	Integrated Assessment	523	PPM
MES	Cobalt	7440-48-4	Inspection.	353	PPM
MES	Copper	7440-50-8		1420	PPM
MES	Lead	7439-92-1		5760	PPM
MES	Zinc	7440-66-6		156,000	PPM
SOL	Methylene Chloride	75-09-2		160.0 J	PPb
SOL	1,1,1 Trichloroethane	71-55-6		290 J	PPb
	Aroclor - 1254	1336-36-3		250	PPb
	Aroclor - 1260	1336-36-3		110 P	PPb

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

1. EPA Land Division Files.

Analytical Result From Field inspection on October 26, 1993.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None Documented or Observed.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1657 04 NARRATIVE DESCRIPTION

Contaminants carried by surface water seeps into Lake Hillsboro.

01 ☒ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 8439 04 NARRATIVE DESCRIPTION

There are 8439 people who live within 4 miles of the site. Elevated levels of heavy metals were found in residential areas around the Eagle Zinc Facility.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None documented or observed.

01 ☒ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 34 04 NARRATIVE DESCRIPTION

There are 34 workers on-site who come in contact with residue materials. The site does not have a fence to prevent young people from entering the property and come in contact with residues.

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION
(Acres)

The entire site is 132 acres which has residue scattered over the majority of the property. Analysis of on-site soils have revealed the presence of heavy metals.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 1657 04 NARRATIVE DESCRIPTION

Contaminants migrated off-site via surface water pathway and deposited into old Lake Hillsboro. Municipal surface water for Hillsboro obtains 25% of its supply from Lake Hillsboro.

01 ☒ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 34 04 NARRATIVE DESCRIPTION

34 Worker on-site. Facility is still in operation

01 ☒ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2137 04 NARRATIVE DESCRIPTION

512 people exposed to Level I concentrations.
1625 people subject to Level II concentrations.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL 980606941

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☒ OBSERVED (DATE: 10/26/94)

☐ POTENTIAL

☐ ALLEGED

Tree directly around the site appeared stunted and some tree appeared dead.

01 ☐ K. DAMAGE TO FAUNA

04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None observed or documented

01 ☒ L. CONTAMINATION OF FOOD CHAIN

04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

Heavy metal which migrate in Lake Hillsboro could potentially contaminate the fish which are used as a food source.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/Runoff/Standing liquids, Leaking drums)

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☒ OBSERVED (DATE: 10/26/94)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

There were no attempts made to prevent residue materials on-site from being carried away from the site in the surface water pathway.

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

Due to the large amount of materials stored on-site, there is a potential for materials to become distributed off the property and onto residential areas.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None documented or observed.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None documented or observed.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 10,130

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA Land Division Files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE

IL

02 SITE NUMBER

980606941

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input checked="" type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCENERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input checked="" type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input type="checkbox"/> I. OTHER (Specify)				

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

No containment systems are use to prevent materials from being carried away from the site through surface erosion

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

IEPA Bureau of Land File.
IEPA Air Pollution Control Files.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

SURFACE WELL
COMMUNITY A. ☒ B. ☐
NON-COMMUNITY (Private) C. ☐ D. ☒

02 STATUS

ENDANGERED AFFECTED MONITORED
A. ☐ B. ☐ C. ☐
D. ☐ E. ☐ F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING
(Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION
(No other water sources available)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION
(Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER _____

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (mi)

04 DEPTH TO GROUNDWATER

05 DIRECTION OF GROUNDWATER FLOW

06 DEPTH TO AQUIFER
OF CONCERN

07 POTENTIAL YIELD
OF AQUIFER

08 SOLE SOURCE AQUIFER

☐ YES ☐ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

10 RECHARGE AREA

☐ YES
☐ NO

COMMENTS

Unknown

11 DISCHARGE AREA

☐ YES
☐ NO

COMMENTS

Unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION
DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY
IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

AFFECTED

DISTANCE TO SITE

Lake Hillsboro ☐ 0.07 (mi)
Lake Glenn Shoals ☐ _____ (mi)
_____ ☐ _____ (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE

A. 5139
NO. OF PERSONS

TWO (2) MILES OF SITE

B. 7549
NO. OF PERSONS

THREE (3) MILES OF SITE

C. 7916
NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

214 ft
(mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

Unknown

04 DISTANCE TO NEAREST OFF-SITE BUILDING

_____ (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

IL EPA Land Division Files.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER 980606941

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

Unknown (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

_____ (ft)

05 SOIL pH

06 NET PRECIPITATION

39.0 (in)

07 ONE YEAR 24 HOUR RAINFALL

3.0 (in)

08 SLOPE
SITE SLOPE

DIRECTION OF SITE SLOPE

TERRAIN AVERAGE SLOPE

_____ %

_____ %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A. _____ (mi)

B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: None

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS; NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

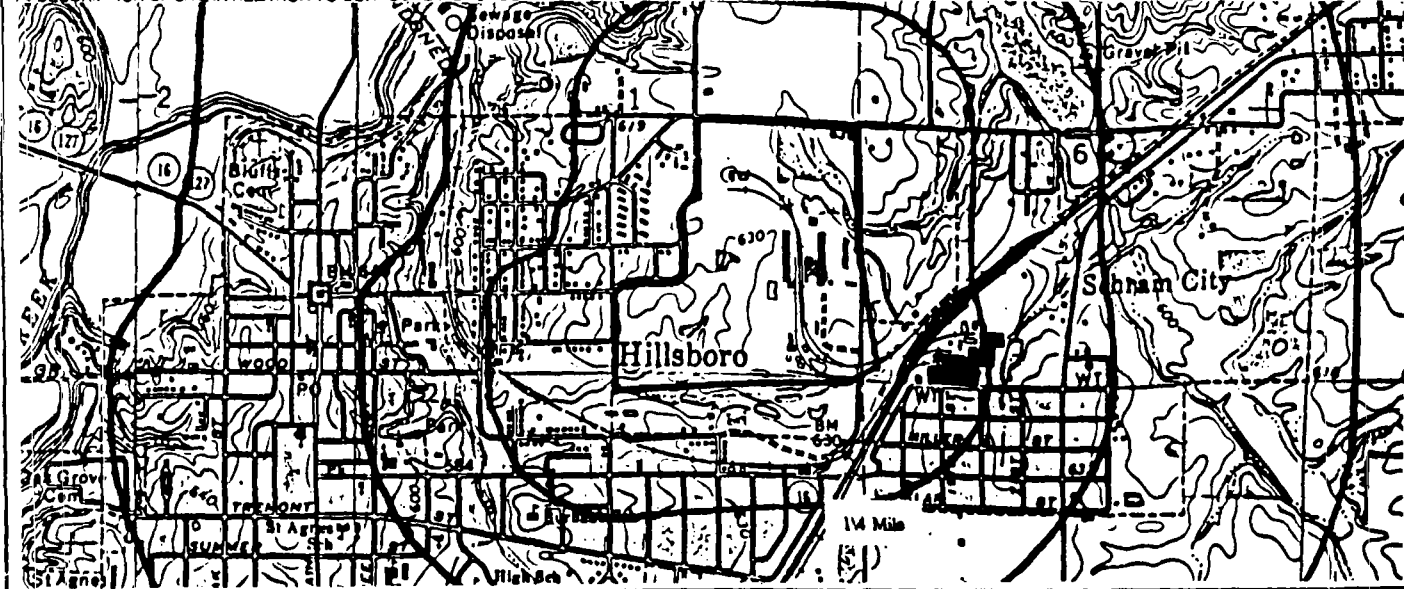
A. 0.2 (mi)

B. 0.04 (mi)

C. 0 (mi)

D. 0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, records)



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	None		
SURFACE WATER	None		
WASTE	None		
AIR	None		
RUNOFF	8 (duplicate)	(Sediment sample) Same as Soil	
SPILL	None		
SOIL	20	IEPA Labs Springfield-Organic Champaign-Inorganic	
VEGETATION	None		
OTHER	None		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Sediment samples	Locations, depth of samples, appearance, measurement from identifiable landmark.
Soil samples	"same as Sediment sample comments"

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>Illinois EPA/Bureau of Land/Records</u> <small>(Name of organization or individual)</small>
03 MAPS <input type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS _____

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Visual observations and photographic documentation of each sampling location.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

II. EPA Division of Land Files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. CURRENT OWNER(S)

01 NAME Eagle Zinc Co.			02 D+B NUMBER			08 NAME T.L. Diamond Company			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.) P.O. Box 340			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.) 30 Rockefeller Plaza			11 SIC CODE								
05 CITY Hillsboro			06 STATE IL			07 ZIP CODE 62049			12 CITY New York			13 STATE			14 ZIP CODE		
01 NAME Tom A. Youngless Plant Manager			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		
01 NAME			02 D+B NUMBER			08 NAME			09 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			12 CITY			13 STATE			14 ZIP CODE		

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME Sherwin William			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			05 CITY			06 STATE			07 ZIP CODE		
01 NAME Eagle-Pitcher Co.			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			05 CITY			06 STATE			07 ZIP CODE		
01 NAME			02 D+B NUMBER			01 NAME			02 D+B NUMBER								
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE			03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE								
05 CITY			06 STATE			07 ZIP CODE			05 CITY			06 STATE			07 ZIP CODE		

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois EPA Division of Land Files.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (If applicable)

01 NAME:		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME:		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME:		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME:		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL 980606941

II. ON-SITE GENERATOR

01 NAME Eagle Zinc Co.	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.) P.O. Box 340	04 SIC CODE
05 CITY Hillsboro	06 STATE 07 ZIP CODE IL 62049

III. OFF-SITE GENERATOR(S)

01 NAME N. A.	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

On-site Reconnaissance of Eagle Zinc Co. by Mr. Brad Taylor
Oct. 1, 1993.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IL 980606941

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N.A.	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IL 980606941

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ S. CAPPING/COVERING
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ V. BOTTOM SEALED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ W. GAS CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ X. FIRE CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

01 ☐ Z. AREA EVACUATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

01 ☐ 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

01 ☐ 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N.A.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

IL EPA Land Division Files.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	980 606 9411

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

APPENDIX C
TARGET COMPOUND LIST

TARGET COMPOUND LIST

Volatile Target Compounds

Chloromethane	1,2-Dichloropropane
Bromomethane	cis-1,3-Dichloropropane
Vinyl Chloride	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropane
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroethane (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
2-Butanone	Toluene
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethylbenzene
Vinyl Acetate	Styrene
Bromodichloromethane	Xylenes (total)

Base/Neutral Target Compounds

Hexachloroethane	2,4-Dinitrotoluene
bis(2-Chloroethyl) Ether	Diethylphthalate
Benzyl Alcohol	N-Nitrosodiphenylamine
bis(2-Chloroisopropyl) Ether	Hexachlorobenzene
N-Nitroso-Di-n-Propylamine	Phenanthrene
Nitrobenzene	4-Bromophenyl-phenylether
Hexachlorobutadiene	Anthracene
2-Methylnaphthalene	Di-n-Butylphthalate
1,2,4-Trichlorobenzene	Fluoranthene
Isophorone	Pyrene
Naphthalene	Butylbenzylphthalate
4-Chloroaniline	bis(2-Ethylhexyl) Phthalate
bis(2-chloroethoxy) Methane	Chrysene
Hexachlorocyclopentadiene	Benzo(a) Anthracene
2-Chloronaphthalene	3,3'-Dichlorobenzidene
2-Nitroaniline	Di-n-Octyl Phthalate
Acenaphthylene	Benzo(b) Fluoranthene
3-Nitroaniline	Benzo(k) Fluoranthene
Acenaphthene	Benzo(a) Pyrene
Dibenzofuran	Indeno(1,2,3-cd) Pyrene
Dimethyl Phthalate	Dibenz(a,h) Anthracene
2,6-Dinitrotoluene	Benzo(g,h,i) Perylene
Fluorene	1,2-Dichlorobenzene
4-Nitroaniline	1,3-Dichlorobenzene
4-Chlorophenyl-phenylether	1,4-Dichlorobenzene

Acid Target Compounds

Benzoic Acid	2,4,6-Trichlorophenol
Phenol	2,4,5-Trichlorophenol
2-Chlorophenol	4-Chloro-3-methylphenol
2-Nitrophenol	2,4-Dinitrophenol
2-Methylphenol	2-Methyl-4,6-dinitrophenol
2,4-Dimethylphenol	Pentachlorophenol
4-Methylphenol	4-Nitrophenol
2,4-Dichlorophenol	

Pesticide/PCB Target Compounds

alpha-BHC	Endrin Ketone
beta-BHC	Endosulfan Sulfate
delta-BHC	Methoxychlor
gamma-BHC (Lindane)	alpha-Chlorodane
Heptachlor	gamma-Chlorodane
Aldrin	Toxaphene
Heptachlor epoxida	Aroclor-1016
Endosulfan I	Aroclor-1221
4,4'-DOE	Aroclor-1232
Dieldrin	Aroclor-1242
Endrin	Aroclor-1248
4,4'-DDD	Aroclor-1254
Endosulfan II	Aroclor-1260
4,4'-DDT	

Inorganic Target Compounds

Aluminum	Manganese
Antimony	Mercury
Arsenic	Nickel
Barium	Potassium
Beryllium	Selenium
Cadmium	Silver
Calcium	Sodium
Chromium	Thallium
Cobalt	Vanadium
Copper	Zinc
Iron	Cyanide
Lead	Sulfide
Magnesium	Sulfate

SPECIAL PESTICIDE LIST

2,4-D

Atrazine

Metolachlor -- Dual

Cyanazine -- Bladex

Fonofos -- Dyfonate

EPTC -- Eptam, Eradicane

Phorate

Metribuzin -- Lexone, Sencor


Trifluralin -- Treflan

Diazinon

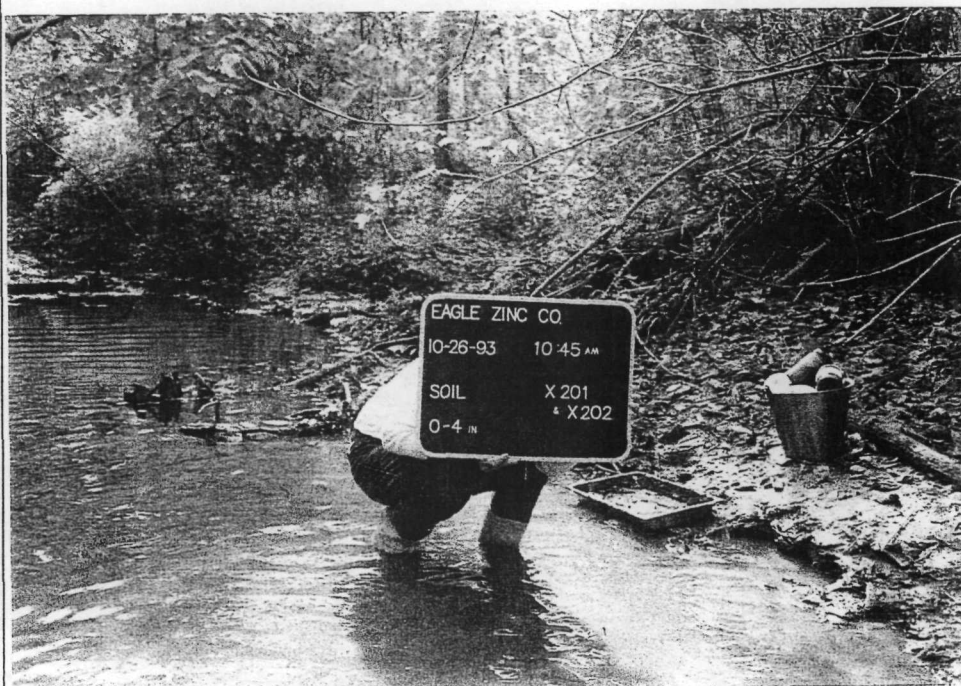
Alachlor -- Lasso

APPENDIX D
EXPANDED SITE INSPECTION PHOTOGRAPHS


EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE IL# #: 980606941 COUNTY: MONTGOMERY
TIME: 10:45 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: BRUCE EVERETTS	
COMMENTS: Picture taken toward: WEST	
Sample X201\X202	
(DUP. of X201)	
Background sediment sample.	
Roll 1, Photo 7	
Depth 0-4 in	

DATE: 10/26/93
TIME: 10:45 A
PHOTOGRAPH TAKEN BY: BRUCE EVERETTS
COMMENTS: Picture taken toward: SOUTH
SAMPLE X201\X202
(DUP. of X201).
Background sediment sample.
Depth 0-4 in
Roll 1, Photo 8




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 9:50 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTHEAST	
SAMPLE X203	
Sediment sample.	
Hillsboro Water	
Plant in the back-ground.	
Roll 1, Photo 5	
Depth 0-4 in	

DATE: 10/26/93
TIME: 9:50 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: SOUTH
SAMPLE X203
Sediment sample.
Depth 0-4 in
Roll 1, Photo 6




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILID#: 980606941 COUNTY: MONTGOMERY
TIME: 9:15 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTHEAST	
Sample X 204	
Sediment sample.	
Depth 0-4 in	
Roll 1, Photo 3	

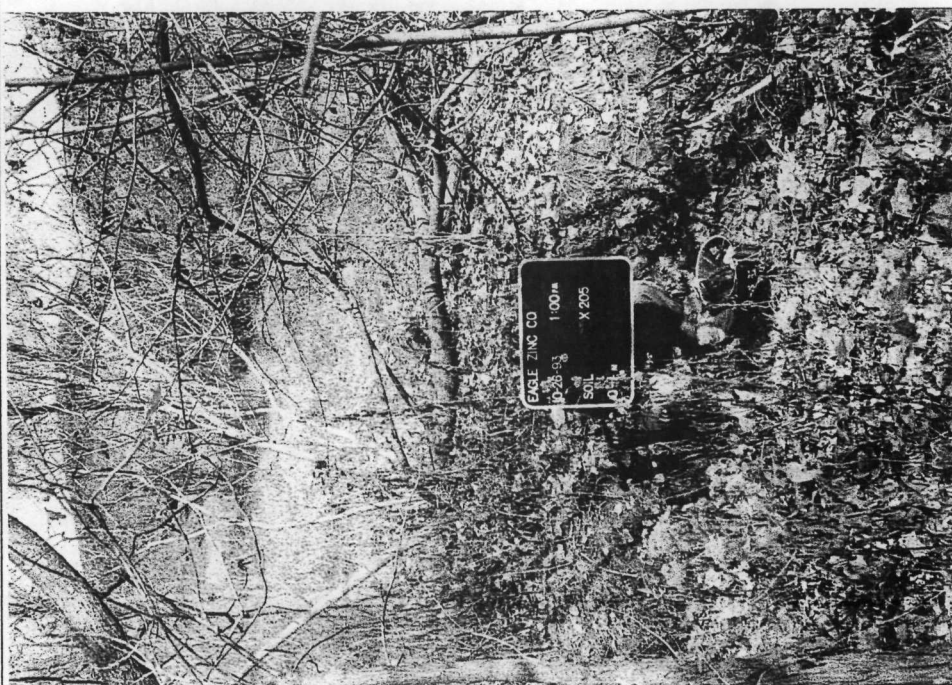
DATE: 10/26/93
TIME: 9:15 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: SOUTH
Sample X 204
Sediment sample.
Depth 0-4 in
Roll 1, Photo 4




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 1:00 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTHEAST	
Sample X205	
Eagle Zinc Co.	
residue pile in background, sample was collected off-site. Depth 0-4 in	
Roll 1, Photo 11	

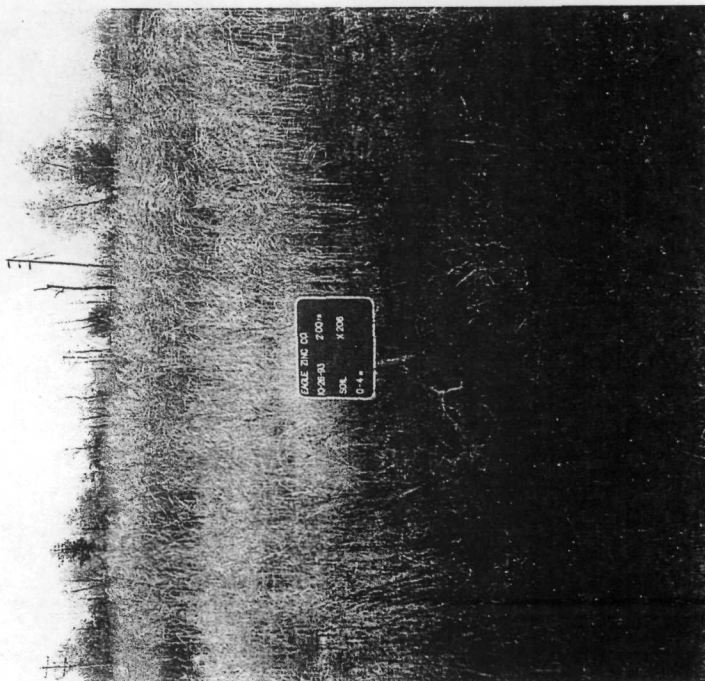
DATE: 10/26/93
TIME: 1:00 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTHEAST
Sample X 205
Sediment sample.
Zinc residue pile in background.
Depth 0-4 in
Roll 1, Photo 12



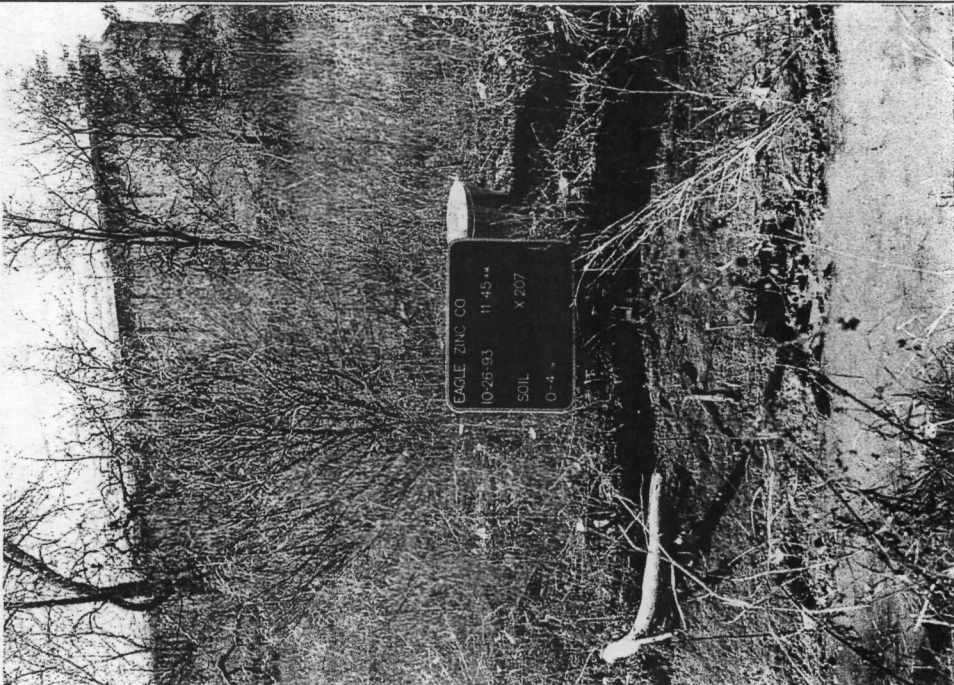
EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 2:00 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTHEAST	
Sample X 206	
Sediment sample.	
Eagle Zinc Co. in the background.	
Depth 0-4 in	
Roll 2, Photo 1	

DATE: 10/26/93
TIME: 2:00 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTHWEST
Sample X 206
Sediment sample in swampy area before on-site pond.
Depth 0-4 in
Roll 2, Photo 2




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 11:45 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTHWEST	
Sample X 207	
Sediment sample	
from stream drain-	
north end of site.	
Eagle Zinc in back.	
Depth 0-4 in	
Roll 1, Photo 9	

DATE: 10/26/93
TIME: 11:45 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: EAST
Sample X 207
Sediment sample.
Depth 0-4 in
Roll 1, Photo 10



EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 8:45 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: WEST	
Sample X 208	
Sediment sample	
near point at which stream empties into	
Lake Hillsboro.	
Depth 0-4 in	
Roll 1, Photo 1	

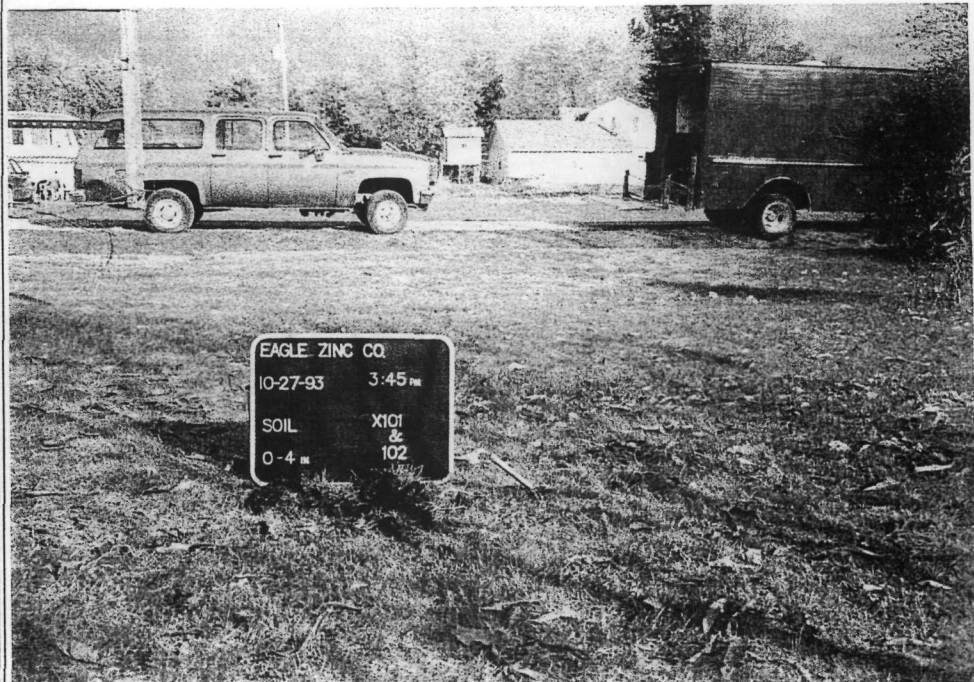
DATE: 10/26/93
TIME: 8:45 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X 208
Sediment sample.
Lake Hillsboro in the background.
Depth 0-4 in
Roll 1, Photo 2




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 3:45 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X101\102	
(Dup. of X101)	
Background soil sample.	
Depth 0-4 in	
Roll 5, Photo 6	

DATE: 10/27/93
TIME: 3:45 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: EAST
Sample X101\X102
(Dup. of X101)
Background soil sample.
Depth 0-4 in
Roll 5, Photo 7




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE IL# #: 980606941 COUNTY: MONTGOMERY
TIME: 3:45 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTHEAST	
Sample X103	
Soil sample taken on the northwest portion of the site	
Depth 0-4 in	
Roll 2, Photo 9	

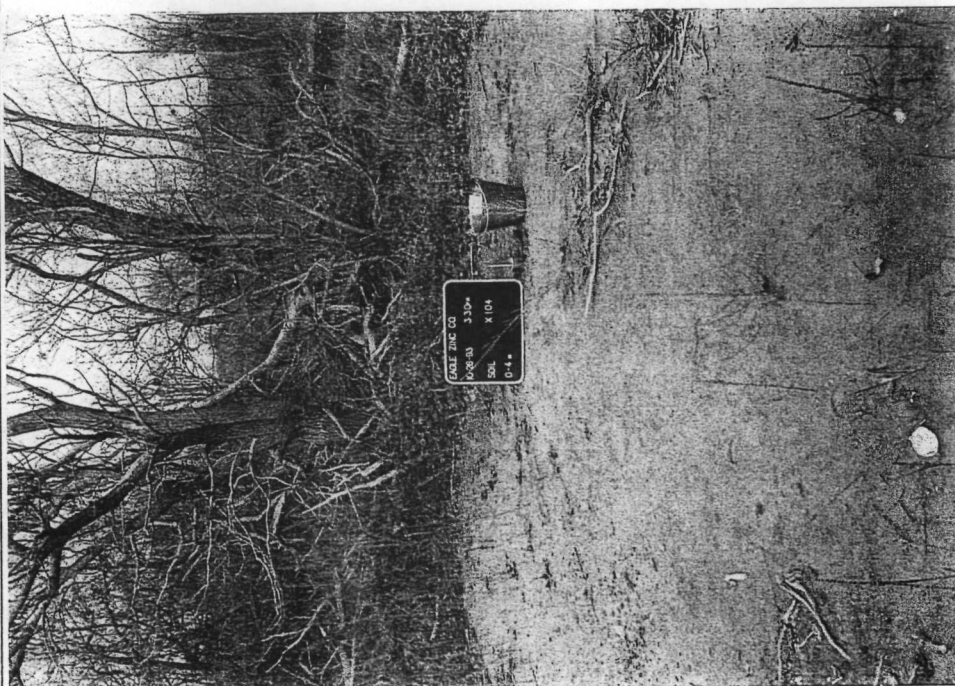
DATE: 10/26/93
TIME: 3:45 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: WEST
Sample X103
Soil sample. Residences in background.
Depth 0-4 in
Roll 2, Photo 10



EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILID#: 980606941 COUNTY: MONTGOMERY
TIME: 3:30 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X104	
Soil sample north of the Eagle Zinc "Zebra" building.	
Depth 0-4 in	
Roll 2, Photo 5	

DATE: 10/26/93
TIME: 3:30 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X104
Soil sample. Note stressed vegetation
Depth 0-4 in
Roll 2, Photo 6




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 2:45 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTH	
Sample X105	
Sample from residue	
pile located on the	
southwest portion	
of the site.	
Depth 0-4 in	
Roll 2, Photo 3	

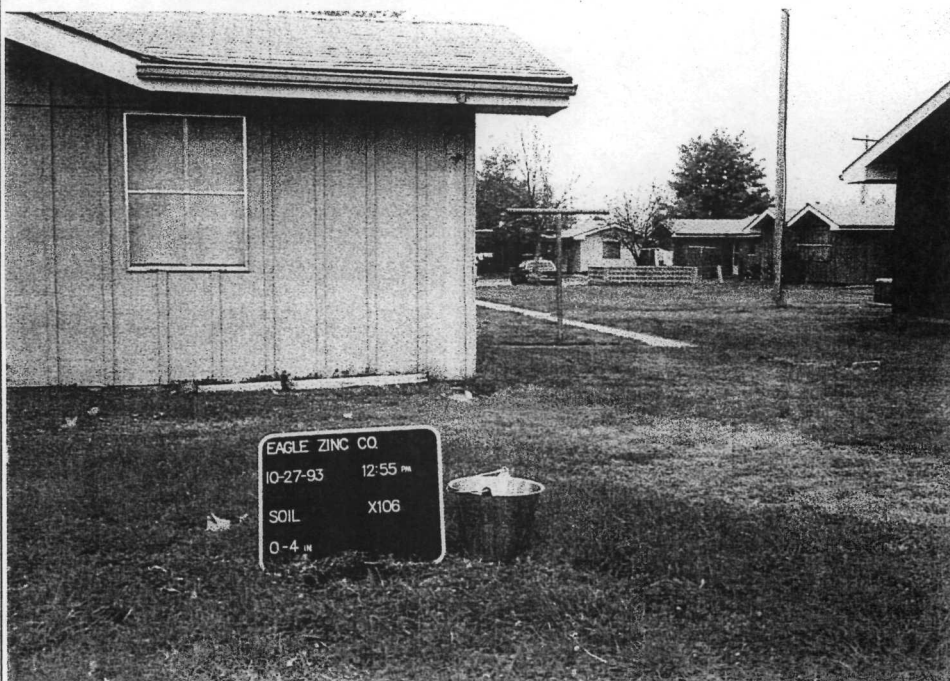
DATE: 10/26/93
TIME: 2:45 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTHEAST
Sample X105
Sample from residue
pile on SW portion
of site. Zinc plant
in background.
Depth 0-4 in
Roll 2, Photo 4




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 12:55 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTHEAST	
Sample X106	
Residential soil sample.	
Depth 0-4 in	
Roll 5, Photo 2	

DATE: 10/27/93
TIME: 12:55 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X106
Residential soil sample.
Depth 0-4 in
Roll 5, Photo 3




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 1:20 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: EAST	
Sample X107	
Residential soil sample.	
Depth 0-4 in	
Roll 5, Photo 4	

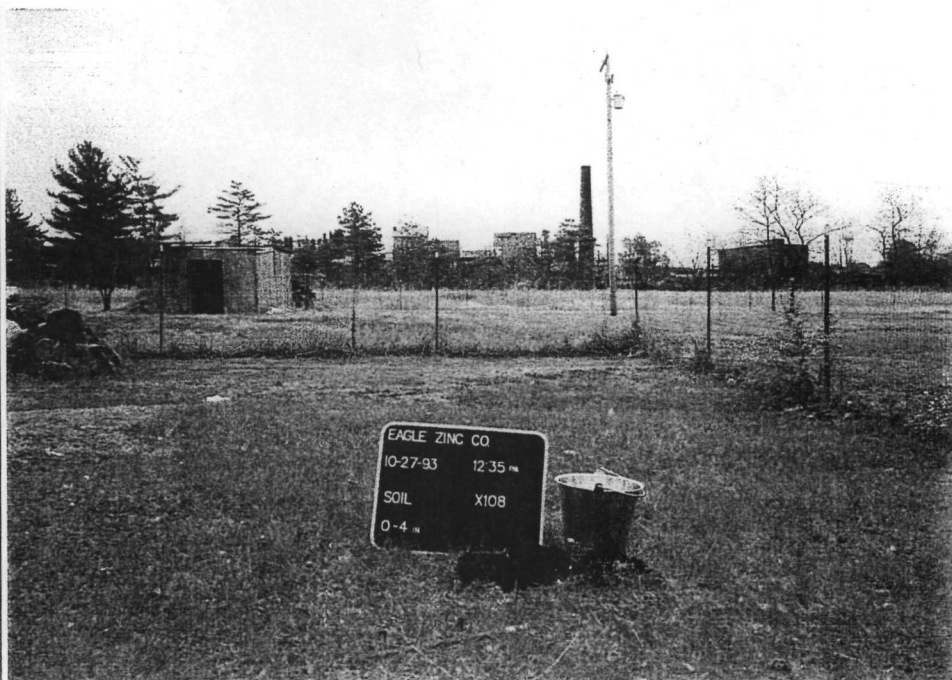
DATE: 10/27/93
TIME: 1:20 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X107
Residential soil sample.
Depth 0-4 in
Roll 5, Photo 5




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 12:35 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTH	
Sample X108	
Residential soil sample.	
Depth 0-4 in	
Roll 4, Photo 11	

DATE: 10/27/93
TIME: 12:35 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: EAST
Sample X108
Residential soil sample.
Depth 0-4 in
Roll 4, Photo 12




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILID#: 980606941 COUNTY: MONTGOMERY
TIME: 12:15 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: WEST	
Sample X109	
Residential soil sample.	
Depth 0-4 in	
Roll 4, Photo 9	

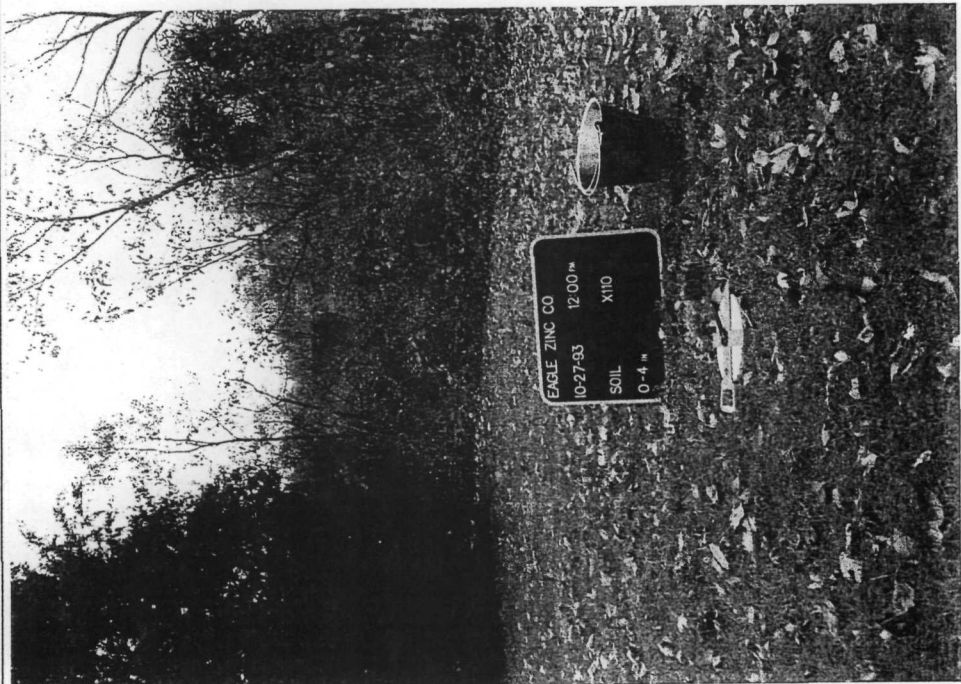
DATE: 10/27/93
TIME: 12:15 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X109
Residential soil sample.
Depth 0-4 in
Roll 4, Photo 10




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 12:00 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTHWEST	
Sample X110	
Residential soil sample.	
Depth 0-4 in	
Roll 4, Photo 7	

DATE: 10/27/93
TIME: 12:00 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: SOUTHEAST
Sample X110
Residential soil sample. Zinc residue pile directly behind photo board.
Depth 0-4 in
Roll 4, Photo 8




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 10:45 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X111	
Residential soil sample.	
Depth 0-4 in	
Roll 4, Photo 5	

DATE: 10/27/93
TIME: 10:45 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X111
Residential soil sample.
Depth 0-4 in
Roll 4, Photo 6



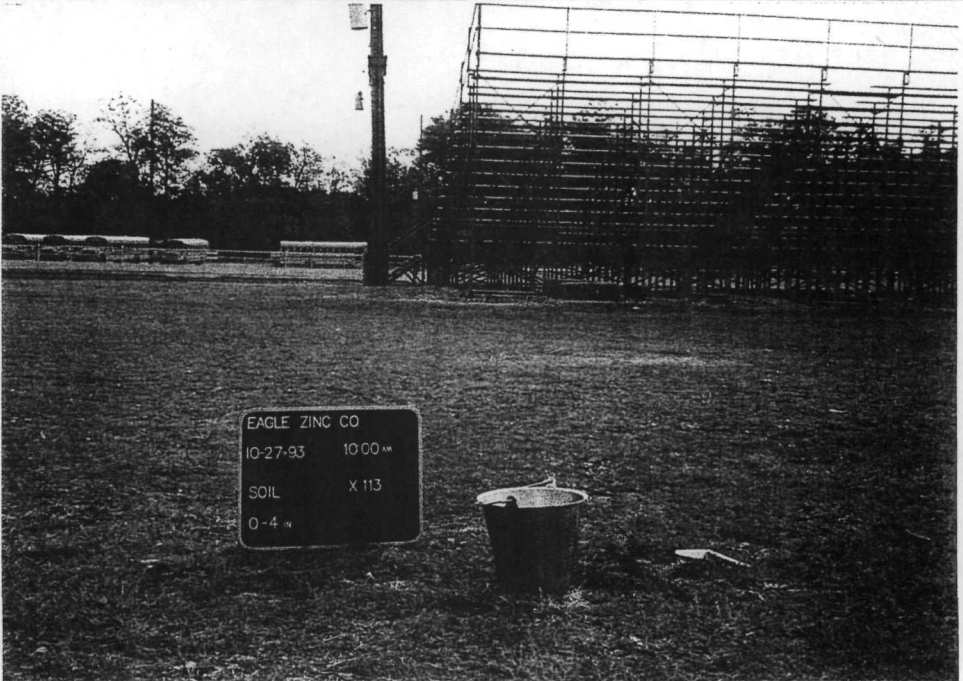
EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 10:15 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTH	
Sample X112	
Soil sample at	
Beckmeyer Grade	
School on Fair-ground Street.	
Depth 0-4 in	
Roll 4, Photo 3	

DATE: 10/27/93
TIME: 10:15 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: WEST
Sample X112
Soil sample at
Beckmeyer Grade
School on Fair-ground Street.
Depth 0-4 in
Roll 4, Photo 4



EXPANDED SITE INSPECTION PHOTOS


DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 10:00 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: EAST	
Sample X113	
Soil sample taken from Hillsboro High School baseball outfield.	
Depth 0-4 in	
Roll 4, Photo 1	

DATE: 10/27/93
TIME: 10:00 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X113
Soil sample from baseball outfield with Hillsboro High school in backgrd.
Depth 0-4 in
Roll 4, Photo 2



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EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 9:05 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: WEST	
Sample X114	
Residential soil sample.	
Depth 0-4 in	
Roll 3, Photo 11	

DATE: 10/27/93
TIME: 9:05 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTH
Sample X114
Residential soil samples.
Depth 0-4 in
Roll 3, Photo 12




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 8:50 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTH	
Sample X115	
Residential soil sample.	
Depth 0-4 in	
Roll 3, Photo 9	

DATE: 10/27/93
TIME: 8:50 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: SOUTH
Sample X115
Residential soil sample.
Depth 0-4 in
Roll 3, Photo 10




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/27/93	SITE IL# : 980606941 COUNTY: MONTGOMERY
TIME: 8:35 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X116	
Residential soil sample.	
(Photo should have read AM) .	
Depth 0-4 in	
Roll 3, Photo 7	

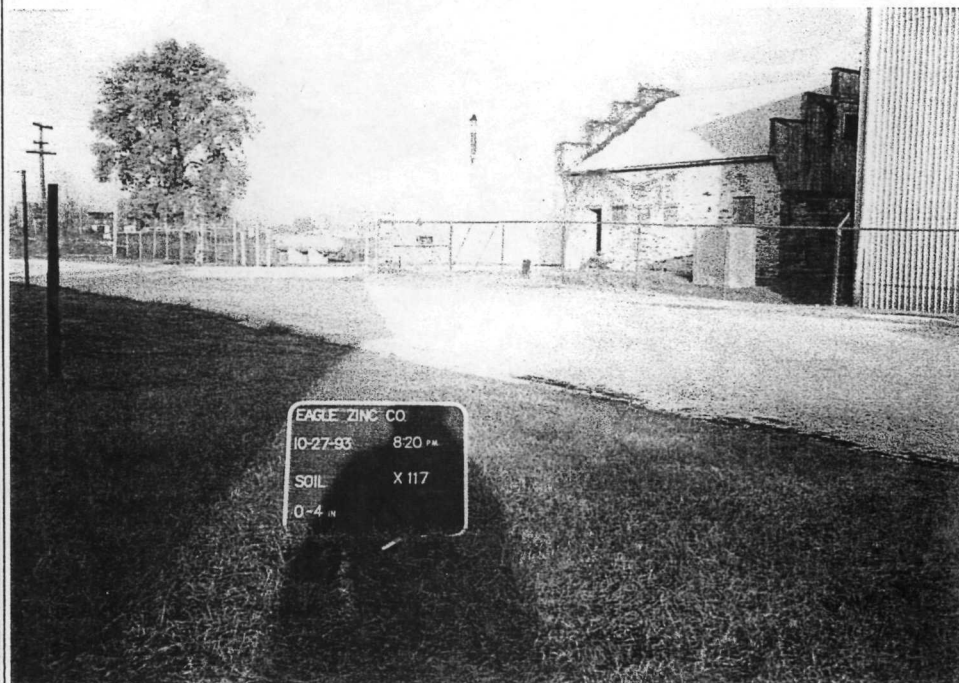
DATE: 10/27/93
TIME: 8:35 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: EAST
Sample X116
Residential soil sample.
(Photo should have read AM) .
Depth 0-4 in
Roll 3, Photo 8



EXPANDED SITE INSPECTION PHOTOS


DATE: 10/27/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 8:20 A	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X117	
Residential soil sample.	
(Photo should have read AM) .	
Depth 0-4 in	
Roll 3, Photo 5	

DATE: 10/27/93
TIME: 8:20 A
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: NORTHWEST
Sample X117
Residential soil sample.
(Photo should have read AM) .
Depth 0-4 in
Roll 3, Photo 6



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EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 4:35 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: NORTH	
Sample X118	
Residential soil sample.	
Depth 0-4 in	
Roll 2, Photo 11	

DATE: 10/26/93
TIME: 4:35 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: SOUTHWEST
Sample X118
Residential soil sample.
Depth 0-4 in
Roll 2, Photo 12




EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 4:50 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: SOUTH	
Sample X119	
Residential soil sample.	
Depth 0-4 in	
Roll 3, Photo 1	

DATE: 10/26/93
TIME: 4:50 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: WEST
Sample X119
Residential soil sample.
Depth 0-4 in
Roll 3, Photo 2



EXPANDED SITE INSPECTION PHOTOS

DATE: 10/26/93	SITE ILD#: 980606941 COUNTY: MONTGOMERY
TIME: 5:10 P	SITE NAME: EAGLE ZINC COMPANY
PHOTOGRAPH TAKEN BY: MARK WAGNER	
COMMENTS: Picture taken toward: WEST	
Sample X120	
Residential soil sample.	
Depth 0-4 in	
Roll 3, Photo 3	

DATE: 10/26/93
TIME: 5:10 P
PHOTOGRAPH TAKEN BY: MARK WAGNER
COMMENTS: Picture taken toward: EAST
Sample X120
Residential soil sample.
Depth 0-4 in
Roll 3, Photo 4



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APPENDIX E

WELL LOGS

92140001251

REFERENCE #10

SITE NAME EAGLE ZINC CO.

SITE ID ILD9906941

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTION 3 DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 4 1/2 in. Depth 3 1/2 ft.
Curb material concrete Burled Slab: Yes ☐ No ☒
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☐
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)

2. Distance to Nearest:

Building 46 Ft. Seepage Tile Field ☐
Cess Pool ☐ Sewer (non Cast Iron) ☐
Privy ☐ Sewer (Cast Iron) ☐
Septic Tank ☐ Barnyard ☐
Leaching Pit ☐ Manure Pile ☐

3. Well furnishes water for human consumption? Yes ☒ No ☐4. Date well completed 4/23/795. Permanent Pump Installed? Yes ☐ Date ☐ No ☒

Manufacturer ☐ Type ☐ Location ☐
Capacity ☐ gpm. Depth of Setting ☐ Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type ☐7. Pitless Adapter Installed? Yes ☐ No ☒

Manufacturer ☐ Model Number ☐
How attached to casing? ☐

8. Well Disinfected? Yes ☐ No ☒9. Pump and Equipment Disinfected? Yes ☐ No ☒10. Pressure Tank Size ☐ gal. Type ☐
Location ☐11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

line 100 ft -

#1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Edt. Rosenberger Well No. ☐Address ChicagoDriller Henry License No. 44-47111. Permit No. 83958 Date 3/15/7912. Water from Formation 13. County Willat depth 16 to 20 ft. Sec. 6 SE14. Screen: Diam. ☐ in. Twp. 8 NLength: ☐ ft. Slot ☐ Rge. 3 WElev. ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6</u>	<u>plastic</u>	<u>10</u>	<u>10</u>
<u>36</u>	<u>concrete</u>	<u>32</u>	<u>32</u>

SHOW TYPICAL
LOCATION IN
SECTION PLAT
SE SE

16. Size Hole below casing: ☐ in.17. Static level ☐ ft. below casing top which is ☐ ft.above ground level. Pumping level ☐ ft. when pumping atgpm for ☐ hours.

18. FORMATIONS PASSED THROUGH

THICKNESS	DEPTH OF BOTTOM
<u>16</u>	<u>16</u>
<u>4</u>	<u>20</u>
<u>6</u>	<u>26</u>
<u>6</u>	<u>32</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED George Henry DATE 4/23/79

White Copy - Public Health
 Ill. De - Well Contractor
 Yellow Copy - Well Owner
 Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 600, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62708. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

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ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☒ Bored ☒ Hole Diam. in. Depth ft.
 Curb material Burled Slab: Yes ☐ No ☐
 b. Driven Drive Pipe Diam. in. Depth ft.
 c. Drilled Finished in Drift In Rock
 Tubular Gravel Packed
 d. Grout:

(KIND)	FROM (FL.)	TO (FL.)

2. Distance to Nearest

Building 75 Ft. Seepage Tile Field 150
 Cess Pool 125 Sewer (non Cast iron)
 Privy None Sewer (Cast iron)
 Septic Tank 110 Barnyard None
 Leaching Pit Manure Pile None

3. Is water from this well to be used for human consumption?

Yes ☒ No ☐

4. Date well completed 6-22-68

5. Permanent Pump Installed? Yes ☐ No ☒

Manufacturer Type
 Capacity gpm. Depth of setting ft.

6. Well Top Sealed? Yes ☐ No ☒

7. Pitless Adaptor Installed? Yes ☐ No ☒

8. Well Disinfected? Yes ☐ No ☒

9. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

- Real McWilliam's*
 10. Dept. Mines and Minerals permit No. NE4134 Year 1968
 11. Property owner Real McWilliam's Well No. 1
 Address Hillsboro, Ill.
 Driller Geoff Beheringer License No. 92422
 12. Water from Drift 13. County Montgomery
 at depth to ft. Sec. 6
 14. Screen: Diam. in. Twp. 8N
 Length: ft. Slot Rng. 3W
 Elev.

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (FL.)	To (FL.)
<u>48"</u>	<u>inverted</u>	<u>1</u>	<u>37</u>

SHOW LOCATION OF SECTION PLAT
NN NW 68

16. Size Hole below casing: in.

17. Static level 20 ft. below casing top which is 1 ft.

above ground level. Pumping level ft. when pumping at gpm for hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Clay</u>	<u>18 ft</u>	
<u>Sand</u>	<u>9 ft</u>	
<u>Clay</u>	<u>10 ft</u>	

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Geoff Beheringer DATE 11-13-68

70

#2

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION. PREPARED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well

a. Dig ☒ Bore ☐ Hole Diam. 4 1/2 in. Depth 31 ft.
Casing Material Cu Bored Slab: Yes ☒ No ☐
b. Drive ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
d. Tubular ☒ Gravel Packed ☐

FROM (FT.)	TO (FT.)

2. Location of Well:
Building 30 ft. Sepage Tile Field 100
Sewer (non Cast Iron) ---
Sewer (Cast Iron) ---
Barnyard ---
Machine Pile ---
Well furnishes water for human consumption? Yes ☒ No ☐
Date well completed 8-12-77

3. Permanent Pump Installed? Yes ☐ No ☒ Date ---
Manufacturer --- Type --- Location ---
Capacity --- gpm. Depth of Setting --- Ft.
6. Well Top Sealed? Yes ☒ No ☐ Type ---
7. Pitless Adapter Installed? Yes ☐ No ☒
Manufacturer --- Model Number ---
How attached to casing? ---
8. Well Disinfected? Yes ☐ No ☒
9. Pump and Equipment Disinfected? Yes ☐ No ☒
10. Pressure Tank Size --- gal. Type ---
Location ---
11. Water Sample Submitted? Yes ☐ No ☒
REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Robert Lusk (Lusk) Well No. ---
Address Shillbush, Ill
Driller --- License No. 92-471
11. Permit No. 648911 Date Aug 8-77
12. Water from --- 13. County Shannon
at depth 13 to 15 ft. Sec. 64e
14. Screen: Diam. --- in. Twp. 8N
Lor. th: --- ft. Slot --- Rge. 3W
Elev. ---

5. Casing and Liner Pipe

(Inch. dia.)	Length (Feet)	From (Ft.)	To (Ft.)
<u>6</u>	<u>plastic</u>		<u>10</u>
<u>36</u>	<u>cu</u>		<u>31</u>

LOCATION IN SECTION PLAT
SW SW NE

16. Size Hole below casing: --- in.
17. Static level: --- ft. below casing top when is --- ft. above ground level. Pumping level: --- ft. when pumping at --- gpm for --- hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>clay</u>		<u>13</u>
<u>swell</u>		<u>15</u>
<u>hard pan</u>		<u>31</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Engineer. Buehly DATE 8-12-77

White Copy
Ill Dept of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO OPERATORS

FILL IN ALL PERTINENT INFORMATION REQUIRED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

1/6

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☒ Bored ☒ Hole Diam. 4 1/2 in. Depth 18 ft.
Curb material Buried Slab: Yes ☐ No ☐
- b. Driven ☐ Drive Pipe Diam. in. Depth ft.
- c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☐

d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:

Building Ft. Seepage Tile Field
Cess Pool Sewer (non Cast iron)
Privy Sewer (Cast iron)
Septic Tank Barnyard
Leaching Pit Manure Pile

3. Is water from this well to be used for human consumption?

Yes ☐ No ☒

4. Date well completed

5. Permanent Pump Installed?

Yes ☐ No ☒

Manufacturer Type

Capacity gpm. Depth of setting ft.

6. Well Top Sealed?

Yes ☐ No ☒

7. Pitless Adaptor Installed?

Yes ☐ No ☒

8. Well Disinfected?

Yes ☐ No ☒

9. Water Sample Submitted?

Yes ☐ No ☒

REMARKS:

No Building on the Well

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GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 1124572 Year 1965

11. Property Owner Harry Drex Fuller Well No.

Address 227 E. 11th St.

Driller Wm. Bakonyer License No. 92-452

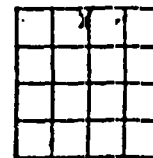
12. Water from Formation 13. County

at depth 15 to 17 ft. Sec. 6.5h

14. Screen: Diam. in. Twp. 8N

Length: ft. Slot Rng. 3W

Elev.



SHOW
LOCATION IN
SECTION PLAT
N E N E W

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>48</u>	<u>Concrete</u>	<u>1</u>	<u>18</u>

16. Size Hole below casing: in.

17. Static level 15 ft. below casing top which is 1 ft. above ground level. Pumping level ft. when pumping at gpm for hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Clay</u>	<u>12</u>	<u>12</u>
<u>Shale</u>	<u>6</u>	<u>18</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Wm. Bakonyer DATE 3-4-69

#4

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

GEOLOGICAL AND WATER SURVEYS WELL RECORD

1. Type of Well

- a. Dug ☒ Bored ☒ Hole Diam. 44 in. Depth 40 ft.
Curb material concrete Buried Slab: Yes ☒ No ☐
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☐
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
Grout	0	40

10. Property owner James Burke Well No.
Address 1111 S. 1st St.
Driller Jim Johnson License No. 92-602
11. Permit No. 108254 Date 7-28-83
12. Water from ground 13. County Montgomery
at depth 16 to 20 ft. Sec. 6
14. Screen: Diam. ☐ in. Twp. 3N
Length: ☐ ft. Slot ☐ Rqs. 3W
Elev. ☐

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
<u>6</u>	<u>Plastic</u>		<u>10</u>
<u>36</u>	<u>Concrete</u>		<u>40</u>

SHOW
LOCATION IN
SECTION PLAT
SE NE NW

16. Size Hole below casing: ☐ in.
17. Static level ☐ ft. below casing top which is ☐ ft.
above ground level. Pumping level ☐ ft. when pumping at ☐
gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
<u>Clay</u>		<u>16</u>
<u>gravel + clay mix</u>		<u>20</u>
<u>clay</u>		<u>26</u>
<u>gray clay</u>		<u>40</u>

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Harold L. L. DATE 8-18-83

#5

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO WELLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE
DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST
JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER
SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dug ☐ Bored ☒ Hole Diam. 36 in. Depth 35 ft.
Curb material ☐ Buried Slab: Yes ☐ No ☒
b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
d. Grout:

(KIND)	FROM (FT.)	TO (FT.)
concrete	0	10
gravel	10	35

2. Distance to Nearest:

Building ☒ ok Ft. Seepage Tile Field ☒ ok
Cess Pool ☒ ok Sewer (non Cast iron) ☒ ok
Privy ☒ ok Sewer (Cast iron) ☒ ok
Septic Tank ☒ ok Barnyard ☒ ok
Leaching Pit ☒ ok Manure Pile ☒ ok

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed July 30, 1979

5. Permanent Pump Installed? Yes ☐ Date ☐ No ☒

Manufacturer ☐ Type ☐ Location ☐

Capacity ☐ gpm. Depth of Setting ☐ Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type concrete cap

7. Pitless Adapter Installed? Yes ☐ No ☐

Manufacturer ☐ Model Number ☐

How attached to casing? ☐

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☐ No ☐

10. Pressure Tank Size ☐ gal. Type ☐

Location ☐

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Douglas White Well No. ☐

Address 431 Taylorsville Rd., Hillsboro, IL

Driller clarence Kohnen License No. 102-30

11. Permit No. 88057 Date July 26, 1979

12. Water from Red sand & clay 13. County Montgomery

at depth 25 to 28 ft. Sec. 6

14. Screen: Diam. ☐ in. Twp. 8n

Length: ☐ ft. Slot ☐ Rge. 3w

Elev. ☐

15. Casing and Liner Pipe ☐

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
36	concrete	0+1	35

LOCATION IN
SECTION PLAT
117 N 139 E 4
SW/8 NW NE NE

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.

above ground level. Pumping level ☐ ft. when pumping at ☐

gpm for ☐ hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
topsoil	1	1
clay	9	10
clay	15	25
red snad clay	3	28
blue clay	7	35

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Clarence Kohnen DATE July 31, 1979

White Copy -
Ill. Dept. of Public Health
Yellow Copy - Well Contractor
Blue Copy - Well Owner

INSTRUCTIONS TO D ERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well

- a. Dig ☐ Bored ☒ Hole Diam. 36 in. Depth 34 ft.
Curb material ☐ Buried Slob: Yes ☐ No ☒
- b. Driven ☐ Drive Pipe Diam. ☐ in. Depth ☐ ft.
- c. Drilled ☐ Finished in Drift ☐ In Rock ☐
Tubular ☐ Gravel Packed ☒
- d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
concrete	0	10
gravel	10	34

2. Distance to Nearest:

- Building ☒ Ft. Seepage Tile Field ☒
- Cess Pool ☒ Sewer (non Cast iron) ☒
- Privy ☒ Sewer (Cast iron) ☒
- Septic Tank ☒ Barnyard ☒
- Leaching Pit ☒ Manure Pile ☒

3. Well furnishes water for human consumption? Yes ☒ No ☐

4. Date well completed July 6, 1979

5. Permanent Pump Installed? Yes ☐ Date ☐ No ☒

Manufacturer ☐ Type ☐ Location ☐
Capacity ☐ gpm. Depth of Setting ☐ Ft.

6. Well Top Sealed? Yes ☒ No ☐ Type concrete cap

7. Pitless Adapter Installed? Yes ☐ No ☐

Manufacturer ☐ Model Number ☐
How attached to casing? ☐

8. Well Disinfected? Yes ☒ No ☐

9. Pump and Equipment Disinfected? Yes ☐ No ☐

10. Pressure Tank Size ☐ gal. Type ☐

Location ☐

11. Water Sample Submitted? Yes ☐ No ☒

REMARKS:

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Robert Montgomery Well No. ☐

Address R. R. #2, Hillboro, IL

Driller Clarence Kohnen License No. 102-30

11. Permit No. 57361 Date July 3, 1979

12. Water from gray gravel 13. County Montgomery

at depth 24 to 25 ft. Sec. 6

14. Screen: Diam. ☐ in. Twp. 8n

Length: ☐ ft. Slot ☐ Rge. 3w

Elev. ☒

15. Casing and Liner Pipe

Diam (in.)	Kind and Weight	From (Ft.)	To (Ft.)
36	concrete	0+1	34

SHOW
LOCATION IN
SECTION PLAT
113°N 95°E 6
SW/4 NE NE NE

16. Size Hole below casing: ☐ in.

17. Static level ☐ ft. below casing top which is ☐ ft.

above ground level. Pumping level ☐ ft. when pumping at

gpm for ☐ hours.

18. FOUNDATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
topsoil brown	1	1
yellow clay	7	8
yellow sandy clay	6	14
gray sandy clay	10	24
gray gravel	1	25
gray sandy clay	9	34

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED 95 DATE July 6, 1979

APPENDIX F

SUMMARY OF ANALYTICAL RESULTS

OF OCTOBER 26-27, 1993

EXPANDED SITE INSPECTION RESULTS

SITE NAME: EAGLE ZINC COMPANY		TABLE 3-2 SEDIMENT SUMMARY						
ILID 980606941								
SAMPLING POINT	X201	X202	X203	X204	X205	X206	X207	X208
PARAMETER	Backgd. Sediment	Dup of X201 Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
VOLATILES UG/KG								
Methylene Chloride	--	--	--	--	--	160.0 J	--	--
Acetone	11.0 J	22.0	12.0 J	22.0 W	37.0 J	78.0 J	--	17.0 W
2-Butanone (MEK)	14.0 W	4.0 J	6.0 J	22.0 W	20.0 J	48.0 J	14.0 W	17.0 W
1,1,1-Trichloroethane	--	--	17.0 W	27.0 J	9.0 J	290.0 J	--	8.0 J
Carbon Tetrachloride	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Bromochloromethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
1,2-Dichloropropane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
cis-1,3-Dichloropropane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Trichloroethene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Dibromochloromethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
1,1,2-Trichloroethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Benzene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Trans-1,3-Dichloropropene	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
Bromodichloromethane	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
4-Methyl-2-Pentanone	--	--	17.0 W	22.0 W	14.0 W	36.0 W	--	17.0 W
2-Hexanone	14.0 W	14.0 W	17.0 W	22.0 W	14.0 W	36.0 W	14.0 W	17.0 W
Tetrachloroethane	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Toluene	--	--	--	22.0 W	14.0 W	36.0 J	--	17.0 W
1,1,2,2-Tetrachloroethane	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Chlorobenzene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Ethylbenzene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Styrene	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
Xylene (total)	--	--	--	22.0 W	14.0 W	36.0 W	--	17.0 W
SEMIVOLATILES UG/KG								
4-Chloroaniline	470.0 W	470.0 W	560.0 W	730.0 W	480.0 W	1200.0 W	440.0 W	560.0 W
2-Methylnaphthalene	--	--	--	--	100.0 J	--	--	--
3-Nitroaniline	1100.0 W	1100.0 W	1400.0 W	1800.0 W	1200.0 W	2800.0 W	1100.0 W	1400.0 W
4-Nitroaniline	1100.0 R	1100.0 R	1400.0 R	1800.0 R	1200.0 R	2800.0 R	1100.0 R	1400.0 R
Phenanthrene	--	--	290.0 J	1900.0	--	--	--	--
Anthracene	--	--	--	320.0 J	--	--	--	--
Carbazole	--	--	--	290.0 J	--	--	--	--
Fluoranthene	--	--	520.0 J	1700.0	--	--	130.0 J	--
Pyrene	--	--	520.0 J	1600.0	--	--	140.0 J	--
3,3'-Dichlorobenzidine	470.0 W	470.0 W	560.0 W	730.0 W	480.0 W	1200.0 W	440.0 W	560.0 W
Benzo(a)anthracene	--	--	230.0 J	850.0	--	--	100.0 J	--
Chrysene	--	--	310.0 J	670.0 J	--	--	120.0 J	--
bis(2-Ethylhexyl)phthalate	--	--	660.0	--	--	--	--	--
Benzo(b)fluoranthene	--	--	480.0 J	--	--	--	140.0 J	--
Benzo(k)fluoranthene	--	--	--	1200.0	--	--	--	--
Benzo(a)pyrene	--	--	230.0 J	810.0	--	--	--	--

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SITE NAME: EAGLE ZINC COMPANY		TABLE 3-2 SEDIMENT SUMMARY						
ILD 980606941								
SAMPLING POINT	X201 Backgd. Sediment	X202 Dup of X201 Sediment	X203 Sediment	X204 Sediment	X205 Sediment	X206 Sediment	X207 Sediment	X208 Sediment
PARAMETER								
PESTICIDES UG/KG								
alpha-BHC	--	--	--	--	--	1.5 J	--	--
beta-BHC	--	--	--	--	--	1.0 JP	--	--
gamma-BHC (Lindane)	--	--	--	--	--	1.1 JP	--	--
Aldrin	--	--	4.4 P	--	--	--	--	--
Heptachlor epoxide	--	0.2 JP	--	1.3 JP	--	4.7 J	--	--
Dieldrin	2.3 J	2.6 J	16.0 P	12.0 P	--	10.0 J	--	1.3 JP
4,4'-DDE	--	0.4 JP	--	--	--	0.7 JP	--	--
Endrin	0.3 JP	0.9 J	18.0 P	12.0	2.4 J	--	--	2.8 JP
Endosulfan II	--	--	--	--	--	--	--	3.6 JP
4,4'-DDD	0.4 JP	0.9 JP	7.5 P	6.0 JP	--	1.8 JP	--	5.1 J
4,4'-DDT	3.7 J	0.4 J	11.0 P	15.0 P	--	4.8 J	--	--
Methoxychlor (Mariate)	--	--	--	--	--	13.0 J	--	--
Endrin Ketone	--	0.5 J	--	--	1.6 J	--	--	--
alpha-Chlorodane	2.0 JP	3.1 P	16.0 P	7.0 P	--	1.7 JP	--	0.6 J
gamma-Chlorodane	2.0 J	2.5	15.0 P	7.4 P	--	3.0 J	--	0.7 JP
Toxaphene	--	110.0 JP	--	--	--	--	--	320.0 P
Aroclor-1254	--	--	250.0	120.0	--	--	--	24.0 JP
Aroclor-1260	17.0 J	9.3 J	110.0 P	100.0	--	--	--	--
INORGANICS MG/KG								
Aluminum	6630.0	6390.0	7370.0	14900.0	8360.0	16300.0	10700.0	9810.0
Antimony	9.0 J	10.4 J	10.3 J	17.4 J	9.3 J	62.7 J	10.7 J	10.8 J
Arsenic	4.6	4.3	8.4	10.9	2.9	19.4	6.0	6.0
Barium	79.5	70.4	99.9	97.4	89.6	383.0	167.0	92.5
Beryllium	0.4 B	0.4 B	0.5 B	0.6 B	0.5 B	1.5 B	0.7 B	0.6 B
Cadmium	0.7 B	--	8.6	7.4	1.8	523.0	11.1	19.6
Calcium	6360.0	5520.0	20300.0	12000.0	4680.0	8260.0	1510.0	3020.0
Chromium	9.9	9.9	12.1	13.2	11.0	28.6	14.6	13.7
Cobalt	6.1 B	4.9 B	5.0 B	6.1 B	4.5 B	353.0	10.8 B	4.7
Copper	11.9	11.2	37.9	41.9	9.0	1420.0	20.8	52.2
Iron	10100.0	9120.0	12400.0	14300.0	10200.0	82400.0	14900.0	14500.0
Lead	46.4	35.0	101.0	72.6	10.2	932.0	76.0	125.0
Magnesium	2760.0	2390.0	3330.0	2960.0	2820.0	4970.0	1500.0	1930.0
Manganese	501.0	384.0	722.0	451.0	85.9	3500.0	1470.0	461.0
Mercury	--	--	0.2	0.1 B	--	0.7	--	0.3
Nickel	9.2 B	8.7 B	11.5	14.7 B	12.6	583.0	11.9	12.7
Selenium	0.3 J	0.3 J	0.3 J	0.4 J	0.3 J	4.1	0.3 J	0.4 J
Silver	0.2	--	--	--	--	14.1	--	--
Sodium	73.3 B	79.8 B	132.0 B	150.0 B	84.7 B	470.0 B	82.0 B	110.0 B
Thallium	0.3 J	--	--	0.4 J	0.3 J	3.8 J	0.3 J	0.4 J
Vanadium	17.9	17.4	19.0	26.3	20.8	52.9	41.2	27.2
Zinc	326.0	291.0	2200.0	3040.0	5690.0	156000.0	2410.0	3280.0

SITE NAME: EAGLE ZINC CO.

ILD 980606941

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT	X101	X102	X103	X104	X105	X106
PARAMETER	Backgd. Soil	Dup of X101 Soil	Soil	Soil	Soil	Soil
INORGANICS MG\KG (ppm)						
Aluminum	12400.00	10000.00	14900.00	6880.00	7430.00	13000.00
Antimony	8.90 J	9.20 J	13.90 J	10.60 J	11.40 J	9.40 J
Arsenic	5.80	5.70	5.00	6.60	86.30	6.20
Barium	230.00	265.00	112.00	181.00	379.00	224.00
Beryllium	0.80 B	0.81 B	0.68 B	0.49 B	0.83 B	0.63 B
Cadmium	--	--	3.20	3.20	47.20	0.89 B
Calcium	10600.00	9880.00	2010.00	598.00 B	1930.00	11600.00
Chromium	16.20	14.40	15.90	10.30	22.60	15.10
Cobalt	4.10 B	6.50 B	12.00 B	13.70	20.10	11.10
Copper	20.00 J	19.70 J	201.00 J	30.60 J	911.00 J	24.70 J
Iron	14700.00	14400.00	13900.00	11500.00	104000.00	15400.00
Lead	148.00	236.00	260.00	61.00	5760.00	28.50
Magnesium	2370.00	2090.00	1970.00	1040.00 B	1630.00	2150.00
Manganese	434.00	686.00	915.00	1180.00	178.00	922.00
Mercury	0.17	0.18	--	--	--	--
Nickel	13.50	11.50	20.00	27.10	55.90	14.00
Potassium	1890.00	1600.00	1120.00 B	491.00 J	300.00 J	1060.00 J
Selenium	--	1.30 J	0.31 J	0.27 J	1.30	--
Silver	--	--	--	--	6.30	--
Sodium	106.00 B	87.90 B	47.80 B	47.50 B	39.60 B	37.40 B
Thallium	0.33 B	0.34 J	0.31 J	1.20 J	1.30 J	0.26 J
Vanadium	28.50	27.10	28.20	27.50	22.60	28.50
Zinc	136.00	138.00	5580.00	4770.00	31700.00	1490.00

~~page 1~~

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SITE NAME: EAGLE ZINC CO.

ILD 980606941

TABLE 3-2
SOIL SUMMARY

SAMPLING POINT	X107	X108	X109	X110	X111	X112
PARAMETER	Soil	Soil	Soil	Soil	Soil	Soil
INORGANICS MG\KG (ppm)						
Aluminum	13000.00	11500.00	10200.00	15000.00	13500.00	9950.00
Antimony	10.50 J	13.00 J	9.30 J	7.90 J	9.00 J	10.20 J
Arsenic	8.70	13.40	4.60	13.60	8.50	6.20
Barium	124.00	267.00	130.00	150.00	193.00	233.00
Beryllium	0.72 B	1.00 B	0.60 B	0.78 B	0.94 B	0.85 B
Cadmium	3.50	11.30	0.71 B	2.00	1.60	2.80
Calcium	5360.00	5430.00	2580.00	3450.00	8380.00	2800.00
Chromium	16.10	23.40	13.40	20.70	20.20	14.80
Cobalt	5.60 B	14.80	6.90 B	8.50 B	7.80 B	11.30 B
Copper	36.40 J	104.00	15.30	22.50	33.80	15.90
Iron	14900.00	33900.00	12600.00	20700.00	19600.00	13900.00
Lead	105.00	388.00	47.00	87.60	70.80	70.10
Magnesium	2090.00	1630.00	1530.00	2500.00	1950.00	1760.00
Manganese	600.00	1670.00	660.00	563.00	491.00	2070.00
Mercury	0.16	0.16	0.11 B	--	0.11 B	0.11 B
Nickel	15.90	35.10	11.00	15.90	16.50	22.90
Potassium	1160.00 J	--	1650.00	1980.00	1920.00	1970.00
Selenium	--	0.84 J	0.31 J	0.49 J	0.42 J	0.39 J
Silver	--	--	--	--	--	--
Sodium	71.80 B	178.00 B	65.70 B	62.80 B	120.00 B	52.40 B
Thallium	0.35 J	1.40 J	0.28 J	--	0.25 J	0.28 J
Vanadium	27.30	37.70	24.70	38.70	34.20	28.20
Zinc	2480.00	2280.00	360.00	606.00	488.00	489.00

~~PAGE 2~~

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SITE NAME: EAGLE ZINC CO.					
ILD 980606941		TABLE 3-2 SOIL SUMMARY			
SAMPLING POINT	X113	X114	X115	X116	X117
PARAMETER	Soil	Soil	Soil	Soil	Soil
INORGANICS MG\KG (ppm)					
Aluminum	16600.00	9750.00	14800.00	12500.00	13800.00
Antimony	7.80 J	8.40 J	11.10 J	9.90 J	14.50 J
Arsenic	5.60	11.90	10.50	7.10	8.50
Barium	116.00	183.00	181.00	227.00	222.00
Beryllium	0.85 B	1.00	0.80 B	0.93 B	1.70
Cadmium	0.68 B	2.90	1.48	2.30	4.80
Calcium	5940.00	4230.00	4970.00	8430.00	19300.00
Chromium	21.70	15.90	19.40	18.90	17.30
Cobalt	10.60	5.80 B	7.00 B	9.80 B	10.60 B
Copper	22.50	28.30 J	27.80 J	25.50 J	57.20 J
Iron	20400.00	28600.00	19700.00	18900.00	21100.00
Lead	75.10	137.00	76.20	147.00	186.00
Magnesium	4870.00	1130.00	2030.00	2020.00	2140.00
Manganese	568.00	314.00	538.00	851.00	995.00
Mercury	--	--	0.42	0.24	0.14 B
Nickel	18.60	14.40	10.90	16.50	27.50
Potassium	2400.00	1040.00	1470.00	1750.00	1460.00 J
Selenium	0.27 J	0.76 J	0.52 J	0.53 J	0.35 J
Silver	--	--	1.20	--	--
Sodium	15.80	293.00 B	61.50 B	89.90 B	1020.00 B
Thallium	0.27 J	0.71 J	0.57 J	0.53 J	0.35 J
Vanadium	33.70	29.70	34.80	35.10	34.30
Zinc	451.00	1580.00	638.00	998.00	7420.00
page 3					

SITE NAME: EAGLE ZINC CO. ILD 980606941	TABLE 3-2 SOIL SUMMARY		
SAMPLING POINT	X118	X119	X120
PARAMETER	Soil	Soil	Soil
INORGANICS MG/KG (ppm)			
Aluminum	14100.00	9390.00	16300.00
Antimony	10.90 J	8.30 J	8.00 J
Arsenic	5.90	6.70	10.70
Barium	106.00	196.00	155.00
Beryllium	0.73 B	0.60 B	0.95
Cadmium	--	2.80	--
Calcium	1720.00	12100.00	2870.00
Chromium	18.50	13.70	20.40
Cobalt	11.10 B	14.90	7.40 B
Copper	15.90 J	17.50 J	17.20 J
Iron	18200.00	14100.00	22900.00
Lead	30.40	51.90	32.70
Magnesium	2120.00	1790.00	2870.00
Manganese	795.00	1520.00	889.00
Mercury	--	0.32	--
Nickel	12.80	14.80	16.90
Potassium	1210.00 J	1670.00	1490.00
Selenium	0.27 J	0.55 J	0.38 J
Silver	--	--	--
Sodium	--	--	27.70 B
Thallium	0.27 J	0.50 J	0.25 J
Vanadium	34.50 B	26.70	39.00
Zinc	354.00	1570.00	371.00

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

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N	Not used	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

APPENDIX G

ILLINOIS DEPARTMENT OF PUBLIC HEALTH EVALUATION
OF ANALYTICAL DATA COLLECTED BY IEPA



ILLINOIS DEPARTMENT OF
PUBLIC HEALTH

A Healthier Today For A Better Tomorrow

John R. Lumpkin, M.D., Director

#302089401H

February 22, 1994

Brad Taylor
Environmental Protection Specialist
Site Assessments Unit
2200 Churchill Road
Springfield, Illinois 62794-9276

RECEIVED
FEB 24 1994
IEPA/DLPC

Dear Mr. Taylor:

I have reviewed the soil sample lab data provided by IEPA Labs for sediments at 16 specific addresses and at other areas in and around Hillsboro, Illinois. The samples were taken on October 26 and 27, 1993 to determine whether a smelting operation is adversely affecting the surrounding environment (IDL# 980606941).

The results of the analyses for inorganic parameters in the off-site residential samples (X106 through X120) indicate manganese as the only contaminant at levels significantly above background that could potentially impact public health. The population of concern would be children who ingest soil through hand-to-mouth activity. Considering the amount and duration of potential exposure, and the low level of manganese absorption in the gut, there is no apparent public health concern. Should the soils where these samples (X106, X108, X112, X116 and X117) were taken be covered by vegetation, the potential exposure to children is even lower. Although manganese levels are elevated in four of the on-site samples, some higher levels of off-site manganese bring the site's contribution to these off-site levels into question.

The same is true for the elevated levels of PAH's along the abandoned railway (X203) and at the sewage disposal area (X204). These chemicals are not found at these levels in the on-site samples. Exposure via ingestion of children to these soils through hand-to-mouth activity could result in a low increased risk of cancer. Volatile organic compounds and pesticides were not detected at levels that would raise a public health concern.

Enclosed you will find copies of the letters sent to the residents whose soils were sampled. I hope this information is helpful. If you have any questions or require additional information, feel free to contact me at 217/782-5830.

Sincerely,

K.D. Runkle
Environmental Toxicologist
Toxicology Section

cc: IDPH, Edwardsville Region
Environmental Health

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APPENDIX H
DEPARTMENT OF CONSERVATION LETTER



Illinois Department of Conservation

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62701-1787 CHICAGO OFFICE • ROOM 4-300 • 100 WEST RANDOLPH • CHICAGO 60601

Brent Manning, Director

John W. Comerio, Deputy Director

Bruce F. Clay, Assistant Director

December 7, 1993

Brad Taylor
LPC/IEPC
2200 Churchill Road
Springfield, IL 62794-9276

Re: ILD #980606941
Eagle Zinc

Dear Mr. Taylor:

Per your November 30, 1993 request the Department has reviewed this proposed CERCLIS Project.

Based on our review there are no sensitive areas (form attached) on-site or in the 0-1/4 or 1/4-1/2 mile radius of the site or along the Middle Fork Shoal Creek waterpath.

The Middle Fork of Shoal Creek is identified as a "moderate aquatic resource" in Special Report #13 of the State Water Plan Task Force.

Thank you for the opportunity to comment.

Sincerely,

Richard W. Lutz
Acting Chief
Division of Impact Analysis

attachment: sensitive areas form

RWL:mcp

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DEPARTMENT OF CONSERVATION IDENTIFICATION OF
ENVIRONMENTAL SENSITIVE AREAS

LD# 980606941

TARGET DISTANCE CATEGORIES

SENSITIVE ENVIRONMENTS	On-site	0-1/4 mile	1/4-1/2 mile	stream mileage
I. Critical habitat for Federally designated or proposed endangered or threatened species	—	—	—	—
II. Habitat known to be used by Federally designated or proposed endangered or threatened species	—	—	—	—
III. State wildlife refuge	—	—	—	—
IV. Spawning areas critical for the maintenance of fish/shellfish species within a river system	—	—	—	with path moderate aquatic resource
V. Terrestrial areas utilized by large or dense aggregations of vertebrate animals for breeding	—	—	—	—
VI. Habitat known to be used by State designated or threatened species	—	—	—	—
VII. Habitat known to be used by a species under review as to its Federal endangered or threatened status	—	—	—	—
VIII. State lands designated for wildlife or game management	—	—	—	—
IX. State designated natural area	—	—	—	—
X. Particular areas, relatively small in size, important to the maintenance of unique biotic communities	—	—	—	—

If any of the sensitive areas identified above exist within the designated target distance limits, please put an asterisk (*) in the appropriate column.

APPENDIX I
AERIAL PHOTOGRAPH LOCATION MAPS
OF EAGLE ZINC COMPANY PROPERTY

SDMS US EPA Region V

Imagery Insert Form

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EAGLE ZINC CO DIV OF T L DIAMOND

Site Information

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[Actions](#) | [Contaminants](#) | [Site-Specific Documents](#)

Site Name: EAGLE ZINC CO DIV OF T L DIAMOND
Street: RD 1200 E SMITH ST & RTE 16E
City / State / ZIP: HILLSBORO, IL 62049

NPL Status: Not on the NPL
Non-NPL Status: Superfund Alternative Site

ERS Exclusion: An Eligible Response Site (ERS) Exclusion decision has been made at this site.

EPA ID: ILD980606941
EPA Region: 05
County: MONTGOMERY

Federal Facility Flag: Not a Federal Facility

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<u>OU</u>	<u>Action Name</u>	<u>Qualifier</u>	<u>Lead</u>	<u>Actual Start</u>	<u>Actual Completion</u>
00	DISCOVERY		F		06/01/1981
00	PRELIMINARY ASSESSMENT	H	S		09/01/1984
00	SITE INSPECTION	N	F		03/04/1986
★ 00	EXPANDED SITE INSPECTION	G	S	10/20/1993	01/17/1996
00	Special Notice Issued		FE		07/12/2001
00	ADMINISTRATIVE ORDER ON CONSENT		FE		12/31/2001
00	REMEDIAL INVESTIGATION/FEASIBILITY STUDY NEGOTIATIONS		FE	07/12/2001	12/31/2001
00	EXPANDED SITE INSPECTION	G	S	04/11/2005	09/26/2005
01	POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION/FEASIBILITY STUDY		RP	12/31/2001	

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